

# **Building primary care in a changing Europe**



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Building primary care in  
a changing Europe

## **Case studies**

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# Austria

*M. Redaelli, S. Wilm, D. Simic, M. Sprenger*

## 1. The context of primary care

### Country and population

The Republic of Austria is by its constitution a semi-presidential parliamentary republic. The country consists of nine federal states, one of which is the metropolitan area of the capital Vienna.

Austria lies geographically in central Europe with a surface of 83 871 km<sup>2</sup>. As there is no direct access to the Mediterranean Sea, it is a landlocked country. More than 60% of the Austrian state area is mountainous. With 8.38 million inhabitants the population density is 99.96 inhabitants per km<sup>2</sup>.

The size of the population is increasing, but like many industrial countries Austria has to face an ageing of the population. In 2009, 15.1% of the population was aged 0–14 years, 67.6% was aged 15–64 years and 17.3% was aged 65 years or older (OECD, 2010).

### Development and economy

Austria's economic system is a market economy, with a GDP of total US\$ 415 billion (nominally) in 2008 and therefore one of the smaller national economies in Europe. Regarding GDP per inhabitant, at US\$ 50.098 (nominally), it counts as the strongest in Europe.

In 2004, Austria spent around €23 billion on its national health care system. This corresponded to 9.6% of its GDP. Inpatient care consumed almost 40% of the total health care expenditure. The proportion of expenditure used for this sector has increased by 2.4% since 1995. Expenditure in hospital outpatient departments is already included in

**Table A1.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Austria	EU <sup>1</sup>	Austria	EU <sup>1</sup>	Austria	EU <sup>1</sup>	Austria	EU <sup>1</sup>	Austria	EU
1995	9.5	7.6	2239	1275.9	843.3	740.9	347.0	292.7	35.9	27.5 <sup>6</sup>
2000	9.9	7.9	2862	1608.0	785.4	669.0	380.6	295.1	35.4	28.3 <sup>5</sup>
2005	10.4	8.5	3472	2150.9	768.2	604.6	431.4	316.0	34.0	26.3 <sup>4</sup>
2009	10.5 <sup>7</sup>	8.8	3970 <sup>7</sup>	2788.2	770.9 <sup>7</sup>	564.8	467.8	321.6	33.2	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Austria	EU <sup>2</sup>	Austria	EU <sup>1</sup>	Austria	EU <sup>1</sup>	Austria	EU <sup>1</sup>
1995	n.a.	575.1	11.2	12.5	21.9	15.7	6.3	6.6
2000	707.3	655.9	9.8	10.3	24.4	17.7	6.7	6.8
2005	717.4	682.7	8.0	9.5	26.1	16.2	6.7	6.8
2009	751.6	745.5	7.9 <sup>7</sup>	8.8	26.7 <sup>7</sup>	15.6	6.9	6.9

Source: EU and Austria average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK.

<sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK.

<sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008.

this item. Around 12% of the costs of public hospitals are accounted for by services provided in hospital outpatient departments. Austria is ranked 25th on the Human Development Index, with 0.851 (UNDP, 2009).

### Population's health

Civilization illnesses are predominant for the spectrum of the health care. For example, chronic heart diseases, diabetes mellitus or cancer are frequent reasons for health care consumption. An feature specific to Austria lies in the high number people affected by depression – 40 000. About 15 000 people per year try to commit suicide. Life expectancy in Austria is 82.1 years for women and 76.4 years for men. Child mortality amounts to 0.45%. With 1.4 children per woman the fecundity rate is one of the lowest in Europe.

### Characteristics of the health care system

Regardless the type of employment in Austria there is a fundamental duty for everyone to have health insurance. Around 80% of the Austrian population is covered by General Social Security Act (ASVG). There is no freedom of choice regarding which fund to join. Only the self-employed can choose between different health insurances (Hofmarcher & Rack, 2006).

Table A1.1 shows Austria has invested in health care well above the EU average level in the past decade. As a result, health expenditures per capita are also high. Overall health care resources (hospital beds, physicians, relative supply of GPs, nurses) and consumption (acute hospital admissions, outpatient contacts) are also relatively high compared to EU averages.

## 2. Structure of the primary care system

### 2.1 Primary care governance

Primary care, which is called in Austrian the “extramural area”, has not been defined with explicit goals in any policy documents.

Primary care does not have a specific department or unit within the Ministry of Health. Responsibilities for primary care have been decentralized to regional level. Financing of primary care is according to the Federal Constitution, primarily the regulatory responsibility of the federal government. Therefore each of the nine federal states can have a different budget size (Hofmarcher & Rack, 2006).

The number and the regional distribution of self-employed physicians are specified in a “location plan”

which is drawn up by the health insurance funds and the physicians' chambers. The aim of this regulatory measure is to avoid imbalances in the provision of health care (Federal Ministry of Health, 1998a).

The treatment tariffs and reimbursement level, the number, and distribution of physicians who are contracted with social insurance companies are based on a "staffing plan" determined by negotiations between the regional health insurance fund and the Physicians' Chamber at federal state level. As a result, many differences exist across the regions in supply of physicians and reimbursements of treatments (Hofmarcher & Rack, 2006). Some of the physicians in private practice, so called "*Wahlärzte*", do not have a contract with a health insurance fund.

Although the main responsibility for and influence on primary care policy development lies with the health insurance funds, community influence on the provision of primary care services has been organized incidentally via ownership of primary care facilities by regional and local authorities (Hofmarcher & Rack, 2006).

The federal sanitation authorities have a specific unit for primary care responsible for state inspection. The existing voluntary mechanisms to maintain and improve the quality of care, such as audits and quality circles, are not taking place systematically. They are introduced and often based on the initiatives of individuals.

Most guidelines for specific use of GPs have been produced by a voluntary professional association of GPs (ÖGAM), adapted from foreign guidelines (e.g. from Finland) or developed by medical specialists. Membership of ÖGAM is voluntary for GPs (ÖGAM, 2010).

Each federal state has a Physicians' Chamber that is a member of the Austrian Physicians' Chamber. The Chamber is responsible for medical education, contracting social health insurance funds, and keeping a register of all physicians.

All GPs are obliged by law to have completed practical training with a minimum duration of three years. Most of this training is spent in training hospitals or outpatient departments. Six months can be spent in teaching practices. However, there is no compulsory training within general practice. At the moment only a small proportion of GPs have completed practical training

within general practice. Continuous medical education is recommended, but not obligatory (Hofmarcher & Rack, 2006).

Patient rights such as informed consent, patient access to own medical files, confidential use of medical records and complaint procedures have been secured by law (Federal Ministry of Health, 1998a, 1998b).

## 2.2 Economic conditions of primary care

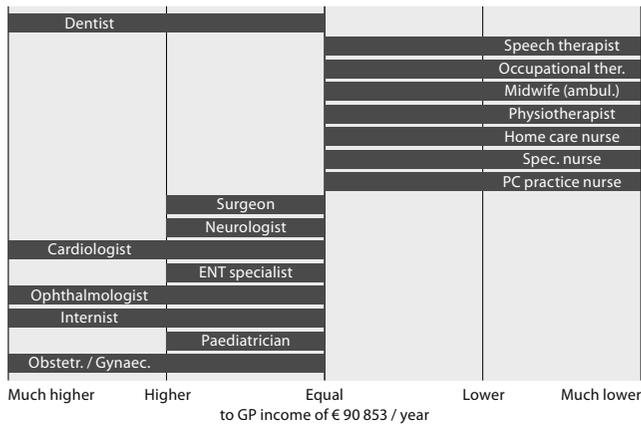
Expenditure on outpatient care amounted to 23.3% of total spending in 2004 and increased by only 3% compared to 1975. However between 1995 and 2004 there was a drop of 1.6%. Alongside the expenditure for the services of GPs and specialists, these items include also payments to psychotherapists. In addition, flat-rate payments by the health insurance funds for treatment in hospital outpatient departments are also included. In 2007, expenditure on outpatient care was €6.8 billion, which counts for 24.7% of total health expenditure (€26.1 billion). 1.7% of the total health expenditure was spent on prevention (Statistics Austria, 2009).

Patients are free to choose from among contracted physicians (including GPs and medical specialists) and independently practising physicians, and can select a physician of their choice for their primary care needs without geographical restrictions. A high proportion of GPs, so called "*Wahlärzte*", do not have a contract with any health insurance company. Many patients appreciate visits to "*Wahlärzte*" as they often provide special services, such as complementary medicine, or have regular appointment systems and more time available.

According to the Austrian Chamber of Physicians there were 12 442 GPs in February 2009. Of these, it is estimated that 51% are self-employed and 49% are salaried, working as ward physicians in hospitals. Among the self-employed physicians, 40% have a contract with one or more health insurance companies, 57% do not have a contract with any health insurance company ("*Wahlärzte*"), and about 3% are non-active registered GPs (e.g. working at a social insurance company, or as occupational health physician (Statistics Austria, 2009). Salaried employed GPs are paid a flat salary, whereas self-employed GPs are paid by a mix of capitation and fee-for-service and other specific components (e.g. basic practice allowance) (Hofmarcher & Rack, 2006). The average annual income of a self-employed GP is €90 852.98 (in 2005) (OECD, 2009b; United Nations, 2010). Fig. A1.1

shows that medical specialists generally have a much higher income, and nurses and allied health care staff a much lower income than salaried GPs. Therefore the income differences are rather large in Austria, and can play a role in the (un)attractiveness of the medical profession of GPs.

**Fig. A1.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



Depending on the type of sickness fund, some patients have no out-of-pocket payments for a visit to their GP, whereas others need to pay 20% of the cost of every visit. It is the same for specialist visits upon referral by GPs and home visits made by GPs: with some insurance funds patients may need to pay a fee for every visit. With the exception of disadvantaged groups, patients pay a small co-payment for medicines or injections prescribed by their GP.

When patients visit a self-employed physician without a contract, 80% of the costs which the health insurance funds would pay for the same service by a contracted physician are reimbursed (after the patient has paid upfront first). The costs of contracted physicians are mostly considerably lower than those of private physicians (“Wahlärzte”), resulting in considerable out-of-pocket payments for patients.

A survey from 2007 showed that 7% of the respondents rated general practice care as not very or not at all affordable (European Commission, 2007).

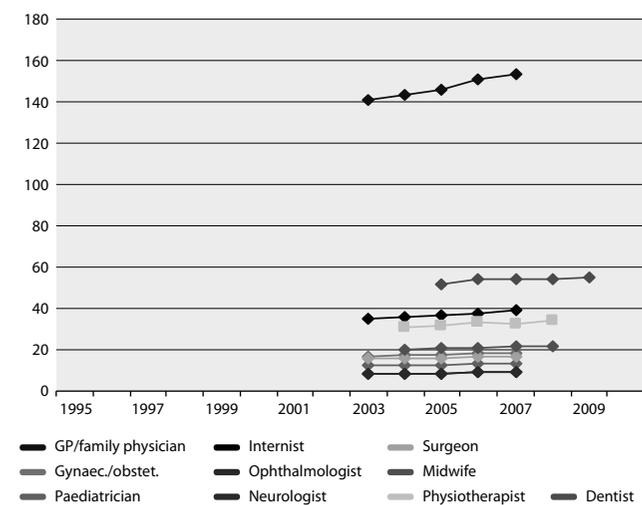
### 2.3 Primary care workforce development

The demography in Austria has led to a considerable increase of the GPs’ workload, caused by the increasing number of chronically ill persons. This development

actually requires an increase of GPs, but instead a growing lack of GPs is observed. The profession of general practice does not attract medical students. This problem is aggravated even more severely by the demography among practising GPs: 45% are aged 55 years or older, 35% are aged 45–55 years, and only 20% are aged 45 years or less. The workload of GPs strongly varies between urban and rural areas. It is estimated that this can range from 20 to 100 working hours per week (Fuchs et al., 2009).

According to Eurostat data, Austria has a very high level of provider availability with 153.3 GPs per 100 000 inhabitants (including GPs working in hospitals as ward doctors) (see Fig. A1.2) (Eurostat, 2010). In contrast to the Eurostat data, Austrian experts maintain there are 72–85 GPs working for the direct health care service per 100 000 inhabitants. The other data corresponding to the different professions are indisputable. The supply density of dentists, internists or surgeons correspond to European standards.

**Fig. A1.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Austria has three departments of family medicine at medical universities (the universities of Graz, Vienna and Innsbruck). Family medicine is a subject in the undergraduate medical curriculum, but there is no postgraduate training programme. After graduating as an MD, graduates have to pass a practical training lasting at least three years (see section 2.1) and an exam to get the “*jus practicandi*”. Graduates are then able to practise as a GP. About 75% of all MDs (number quite constant over the last decade) fulfil this training annually, but only 25% of them work afterwards as self-employed

GPs. The others work as ward doctors, non-contracted GPs, in other areas or they start the training to become a specialist. Some specialists – who have fulfilled the three-year training for GPs – may choose, after working several years in the hospital, to move into primary care and work as a GP instead.

There is professional training specifically for district or community nurses or primary care nurses.

### 3. Primary care process

#### 3.1 Access to primary care services

In total, there were around 1881 inhabitants per GP with a health insurance contract in 2003, and 2071 inhabitants per contracted specialist. The regional variations in the density of provision between the federal states are much more distinct in the case of contracted specialists than in the case of GPs with health insurance fund contracts. In the case of GPs, the difference between the federal states with the lowest and the highest densities of provision is 17 GPs per 100 000 inhabitants (ranging from 44 in Vorarlberg to 61 GPs per 100 000 in Styria); for specialists this is 55 specialists per 100 000 inhabitants (ranging from 33 in Upper Austria to 87 specialists per 100 000 in Vienna) (Statistics Austria, 2009).

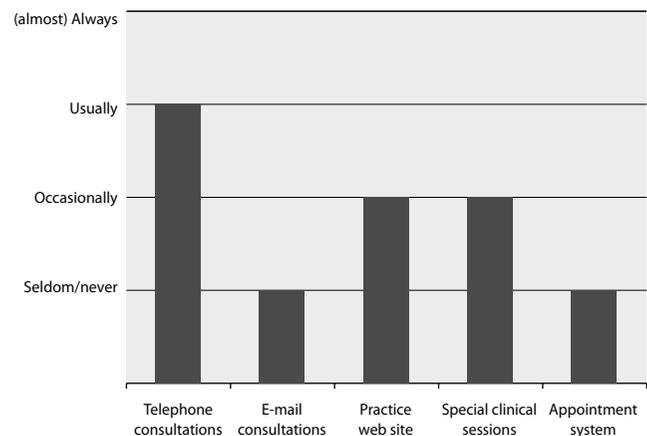
Although there are currently no shortages of GPs according to national norms, more than half of the workforce will retire within 15 years from now. At the moment, particularly in rural areas, it can be difficult for patients to find a GP.

General practices are obliged by law to be open for a minimum of 20 hours per week. However, the actual opening hours may differ across practices. This is particularly the case in private practices, when physicians are also working in private and public hospitals, offering alternative medicine, for example, or very specialized services (Hofmarcher & Rack, 2006).

A survey from 2007 showed that 94% of the respondents found it easy to reach and gain access to GPs (European Commission, 2007). Primary care providers usually carry out telephone consultations, but seldom offer e-mail consultations (see Fig. A1.3). Occasionally primary care practices have a practice website (Dobrev et al., 2008). Few practices have an appointment system and even fewer

have special clinical sessions. The number of home visits offered by GPs can range from 0 to 30 per week (this is included in the fee-for-service incentive system).

**Fig. A1.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



The organization of after-hours primary care differs across urban and rural areas. In urban areas this is organized mainly around two modes. Primary care cooperatives (sponsored by City Councils) and/or hospital departments providing primary care by taking care of health problems after office hours. In rural areas, GPs within one practice or organized in a group of practices look after their patients on out-of-hours schedules.

#### 3.2 Continuity of primary care services

Only some GPs have a patient list system, or use an appointment system. On average, they serve 2000 inhabitants. Patients are free to choose any centre or physician. However, switching physicians within a time period of three months is restricted by some health insurers.

It is estimated that 60–70% of the patients visit their usual primary care provider for their common health problems. There are no reliable data concerning patients' satisfaction with GPs. Only some health insurance companies have conducted surveys on patient satisfaction, which has always been very high.

GPs are obliged by law to keep clinical records for all patient contacts. By now almost all general practices in Austria work with computer support (77% of all GPs in 2007) (Dobrev et al., 2008). Computers are used for drawing up bills, prescription of medicines

and keeping medical records. Computers are not used for communication with patients, colleagues of other professional disciplines, and are rarely used as a search instrument.

Referral letters are used only occasionally by GPs when they refer a patient to a medical specialist. When patients are discharged from the hospital after receiving emergency care, they receive a short discharge letter. However, when they are treated by a primary care cooperative for after-hours care, the GP is rarely informed about the care provided.

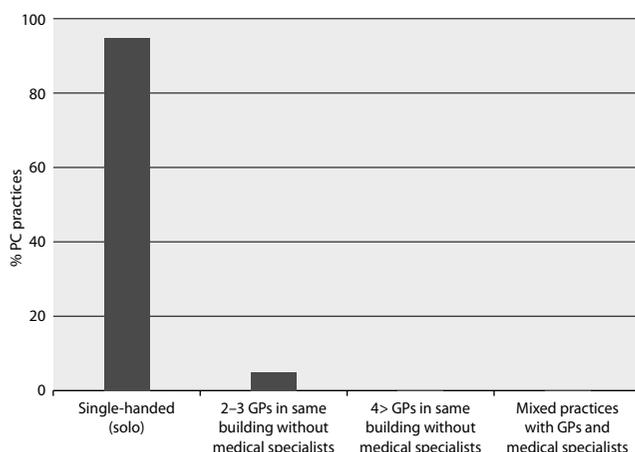
In general, specialists only occasionally communicate back to referring GPs after an episode of treatment.

### 3.3 Coordination of primary care services

There is no gatekeeping system. In principle, patients are free to choose from among contracted physicians and can select a physician of their choice without geographical restrictions. If they choose a GP or specialist without contract, 80% of the costs which the health insurance funds would pay for the same service by a contracted physician are reimbursed (after the patient has paid upfront first).

The practice structures are predominantly single practices (see Fig. A1.4). Only in 5% of the practices do two or three GPs work together in their profession. Other practice forms are not usual in Austria. The form of single-handed practices is a result of historical circumstances. Since August 2010, a new law allows “Ärzte GmbH” (Bundesärztekammer, 2010). For other structures legal basic conditions and suitable incentives by the health insurance companies (which have a strong influence on the form of the health care service in Austria) do not exist.

**Fig. A1.4:** Shared practice



Collaboration within primary care is not common practice. GPs only occasionally have face-to-face meetings with other GPs, home care nurses or physiotherapists, and rarely with midwives, community pharmacists or social workers. They also rarely ask (telephone) advice from medical specialists, and specialists do not provide any joint care with or clinical lessons for GPs.

Task substitutions such as nurse-led diabetes clinics or nurse-led health education do not occur in primary care.

Clinical patient records from primary care are only rarely used at regional or local level to identify health needs or priorities for health policy. The exception is diabetes disease management and influenza surveillance, for which epidemiological data is systematically generated from patient records.

Furthermore, community health surveys are never conducted to improve the quality and responsiveness of primary care.

### 3.4 Comprehensiveness of primary care services

The equipment of primary care practices is regulated by law, incentives of the medical associations and the health insurance companies. GPs are able to carry out basic diagnostic and therapeutic care with this equipment.

In Austria patients often go directly to a medical specialist for their health problems. As a result, patients are usually or occasionally treated by GPs for first-contact care, treatment or follow-up of diseases, medical technical procedures, or preventive care or health promotion (see Table A1.2).

In comparison general practices are the centre of care for many chronic illnesses. This central role for the GP depends on the number of specialists in a specific region. Most specialists have their practices in towns and are therefore not easy to reach for patients in rural areas.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

Classical quality of care data for primary care does not exist in a comprehensive fashion in Austria.

**Table A1.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	–	<ul style="list-style-type: none"> <li>• Woman aged 18 asking for oral contraception</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man with suicidal inclinations</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Peptic ulcer</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from the cornea</li> <li>• Fundoscopy</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> </ul>
Health promotion (from a list of 4 items)	–	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

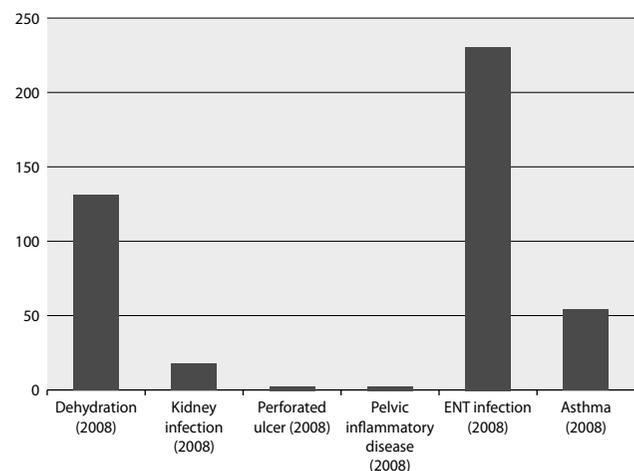
Concerning the quality of diabetes care, it is known that for the adult diabetic population:

- 52% had a cholesterol level of  $5 > \text{mmol/l}$  (in 2005) (RIVM, 2009)
- 30% with a blood pressure above 140/90 mm Hg received a blood pressure measurement in the last 12 months (in 2005) (RIVM, 2009)
- 61% had an HbA1C  $> 7.0\%$  (in 2008) (Cebolla & Bjornberg, 2008)
- 44% of the diabetic population with overweight and obesity had their body mass index (BMI) tested in the last 12 months (in 2008) (Cebolla & Bjornberg, 2008)
- 62% received an eye fundus inspection in the last 12 months (in 2005) (RIVM, 2009).

Another opportunity to measure the quality of primary care is the number of hospital admissions for primary care sensitive conditions as shown in Fig. A1.5. These appeared to be relatively low in 2008, with the exception

of hospital admissions for patients with an ear, nose and throat (ENT) infection, dehydration (Statistics Austria, 2009) and asthma (OECD, 2009a).

**Fig. A1.5:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



The coverage level of vaccination for children is around 80%. Lowest are vaccinations for measles (76%; in 2009), rubella (76%; in 2009) and mumps (79%; in 2003) (WHO Regional Office for Europe, 2010). The vaccinations of children are carried out predominantly by paediatricians and only to a low degree by GPs.

About 43% of the women between 52 and 69 years have undergone a mammography during the last three years. Substantially higher is the portion of those women (81.5%) between 21 and 64 years who had done a Pap test during the last three years (Linós & Riza, 2000; OECD, 2009b; Schopper & De Wolf, 2007; Von Karsa et al., 2007).

#### 4.2 Efficiency of primary care

There are no official statistics available about the efficiency of primary care in Austria.

With three contacts per patient per year, the Austrians visit their GPs infrequently (estimate for 2003). The duration of a general practice consultation is estimated to be about five minutes (in 2009). In addition patients consult the GPs by phone. Experts estimate that about 5–15% of all general practice–patient contacts are telephone consultations and 5% are home visits.

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# 2 Belgium

*T. Cartier, L. Ryssaert, Y. Bourgueil*

## 1. The context of primary care

### Country and population

Belgium has a population of 10.67 million inhabitants in a territory of 30 528 km<sup>2</sup>, with a mean density of 349/km<sup>2</sup>, one of the highest in the developed countries (SPF Economie PME Classes Moyennes et Energie, 2010). The 2008 population growth was 0.78% and the total fertility rate was 1.80 in 2006 (Eurostat, 2010), with 16.9% aged under 14 and 12.3% over 65 (51% are women). It is estimated that 15.6% of Belgian population will be over 65 in 2050 (Bureau fédéral du Plan, 2008). Density is very variable among regions: in Brussels density is highest, with 6459/km<sup>2</sup>, and in other provinces population density varies from 59 (Luxembourg) to 612/km<sup>2</sup> (Antwerpen) (Eurostat, 2010).

### Development and economy

Belgium is a constitutional and parliamentary monarchy. It is a federal state composed of:

- three regions: Brussels-Capital, Flemish and Walloon regions and
- three language communities: Flemish (Dutch-speaking), French (French-speaking) and German-speaking (nine towns).

The Flemish region and language community are merged. The German-speaking communities are located in the Walloon region, on the south-eastern border. Census data

**Table A2.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Belgium	EU <sup>1</sup>	Belgium	EU <sup>1</sup>	Belgium	EU <sup>1</sup>	Belgium	EU <sup>1</sup>	Belgium	EU
1995	8.2	7.6	1853	1275.9	734.51 <sup>8</sup>	740.9	378.5	292.7	55	27.5 <sup>6</sup>
2000	8.6	7.9	2377	1608.0	551.6 <sup>8</sup>	669.0	403.2	295.1	54	28.3 <sup>5</sup>
2005	10.3	8.5	3301	2150.9	526.5 <sup>8</sup>	604.6	416.3	316.0	52	26.3 <sup>4</sup>
2009	10.2 <sup>7</sup>	8.8	3595 <sup>7</sup>	2788.2	516.55 <sup>7,8</sup>	564.8	418.3 <sup>9</sup>	321.6	50 <sup>7,10</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Belgium	EU <sup>2</sup>	Belgium	EU <sup>1</sup>	Belgium	EU <sup>1</sup>	Belgium	EU <sup>1</sup>
1995	1094.6 <sup>11</sup>	575.1	11.4	12.5	18.8	15.7	7.6	6.6
2000	n.a.	655.9	8.9	10.3	16.7	17.7	7.5	6.8
2005	1484	682.7	8.5	9.5	16.1	16.2	7.0	6.8
2009	n.a.	745.5	8.3 <sup>7</sup>	8.8	15.9 <sup>7</sup>	15.6	6.9 <sup>12</sup>	6.9

Source: EU average and Belgian values are based on the European Health for All database (WHO Regional Office for Europe, 2010) unless specified.

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year 2007 instead of 2009. <sup>8</sup> Note that OECD values are quite different from WHO values (respectively 740, 780, 740 and 660). <sup>9</sup> Year 2006 instead of 2009. The figure for practising GPs in 2008 is 293.4, which is more accurate. <sup>10</sup> OECD data on licensed physician, and not practicing GPs (WHO-HFA data stops in 2005, values are slightly different: 48, 45, 42 respectively). The figure for practising GPs is 39 in 2008. <sup>11</sup> No data in both WHO-HFA and OECD databases, except for 1995 (WHO-HFA) and 2005 (OECD). <sup>12</sup> Year 2008 instead of 2009.

based on the mother tongue is not allowed in Belgium, but, by regions, the distribution is 1.05 million (9.8%) inhabitants in Brussels-Capital, 6.16 million (57.8%) in the Flemish region and 3.46 million (32.4%) in the Walloon region, including 74 200 German-speaking citizens (0.7% of the total Belgian population) (SPF Economie PME Classes Moyennes et Energie, 2010).

At the time this report was written (2010), Belgium is going through a period of political instability, mostly due to the lack of agreement between the major parties.

The distribution of responsibilities between the different state levels in Belgium is quite complex and not very clear, due to the lack of application of some articles from the state Constitution. Currently, the federal state has only one defined national responsibility which is the National Health Insurance and has remaining competences, that is, competences that should be the responsibility of communities and regions (but currently aren't), such as justice, taxes, national security, civil laws, etc. Communities are explicitly responsible for education and have implicit other competences: culture, use of languages and some parts of other state competences

if they wish to. Regions are explicitly responsible for agriculture and implicitly for economic and employment policies, regional transport, etc.

Brussels is host to many European and international institutions, including the European Commission, the Council of the European Union, the European Economic and Social Committee and more than 1400 nongovernmental organizations (NGOs). Belgium was 18th in the world economy in 2007, based mainly on services and a strong industrial sector. The GDP per capita is PPP\$ 35 540 (19th in the world) in 2008 (IMF, 2010). Belgium ranked 17th on the Human Development Index with 0.953 (UNDP, 2010). The unemployment rate is 7.9% in 2009. Concerning education, 69.6% of the population has completed secondary education (Eurostat, 2010).

#### Population's health

Life expectancy at birth in Belgium is 82.6 years for women, 77.1 years for men and healthy life expectancy at 65 is respectively 10.3 and 9.1 years (Eurostat, 2010). The infant mortality was 4.0 deaths for 1000 living births in 2007 (Eurostat, 2010). Cardiovascular diseases are

the main cause of death in both sexes, but in different proportions: 31.7% for men, 38.0% for women. Cancer is the second main cause, 30% and 22.7% respectively. Violent deaths account for 7.8% in men versus 4.55% for women (SPF Economie PME Classes Moyennes et Energie, 2004).

#### Characteristics of the health care system

The Belgian health care system is fundamentally based on the 1963 Health Insurance and Hospital Acts. The first describes the compulsory social health insurance and health care provision based on independent medical practice, with freedom of choice of hospital and physicians, who are paid on a fee-for-service scheme. The second act validates the principles of free hospital care for all insured people and introduces hospital norms, accreditation and planning. Since 1990, and especially in 1994 with the Health Insurance Reform Act, because of growing concerns about the financial sustainability of such a system, reforms were adopted to increase budgetary control and accountability of health care providers.

At the federal level, the health care system is mostly under the authority of the Federal Public Service of Public Health, Food Chain, Safety and Environment (a department of the Federal Minister of Social Affairs and Public Health). Financing of health insurance is provided through the collection of social taxes based on salaries and incomes from work: this task is under the responsibility of three main funds (one for salaried workers, ONSS, one for self-employed workers, INASTI, and one for local and provincial civil servants, ONSSAPL). The provision of health insurance (mainly reimbursement of costs for care) is organized by the INAMI/RIZIV for salaried workers and effectively delivered by various private non-profit-making sickness funds. As the collection of social taxes is national, there are no differences in premiums for mandatory health insurance. The linguistic communities are responsible for health promotion and preventive health care (compulsory vaccinations are partly the responsibility of the communities, partly [for reimbursement of some] of the federal government with the exception of compulsory adult and childhood vaccinations), norms and accreditation for hospitals and home care services (Gerkens & Merkur, 2010). Total health care expenditure is above the European average. Acute care hospital admissions and outpatient contacts in 2009 are comparable to the European average (see Table A2.1).

## 2. Structure of the primary care system

### 2.1 Primary care governance

At the federal level, no recent health policy acts show a clear vision on current and future primary care provision. At the community level (Dutch-speaking), some clear targets are set regarding prevention and its place in primary care (Vlaamse Gezondheidsraad, 2006). Some incentives, known as IMPULSEO-1, exist to stimulate GPs to start an office in areas with a lack of family doctors and in deprived areas (INAMI/RIZIV, 2006). But the distribution of health care providers remains mostly based on the free initiative of the professionals (FOD Sociale Zekerheid SPC Sécurité Sociale, 2006; INAMI/RIZIV, 2006).

The management of primary care in Belgium is mostly at the federal level, but a culture of discussion and interaction between the different stakeholders exists at the community level, although they are not involved in the final decisions. Inspection of health care is organized at the community level. The communities are responsible for primary care structures for mother and child care and health at school.

Some initiatives have been taken to enhance quality of care. There are three types of physicians: not certified, certified and accredited. To be certified as a family doctor, GPs must have completed medical studies, including a specialized training and an internship, and have followed different seminars for in total at least 40 hours each year. To become accredited, doctors need to follow continuing medical education, participate in a local quality circle and have more than 1250 encounters with patients per year. When accredited they can ask for higher fees compared to certified family physicians (Royaume de Belgique, 2010). Scientific organizations of family doctors develop guidelines about important health care problems in primary care and there are mandatory regular meetings for peer-reviewed practice (Royaume de Belgique, 1967). At the federal level, IMPULSEO-2 aims to provide financial incentives for electronic network collaboration and employment of supporting staff.

In 2002, patients' rights in primary care were defined by law on various topics such as informed consent, access to their own medical files, confidential use of medical records and patient complaints procedures (Federale Overheidsdienst Volksgezondheid Veiligheid van de Voedselketen en Leefmilieu, 2002).

### 2.2 Economic conditions of primary care

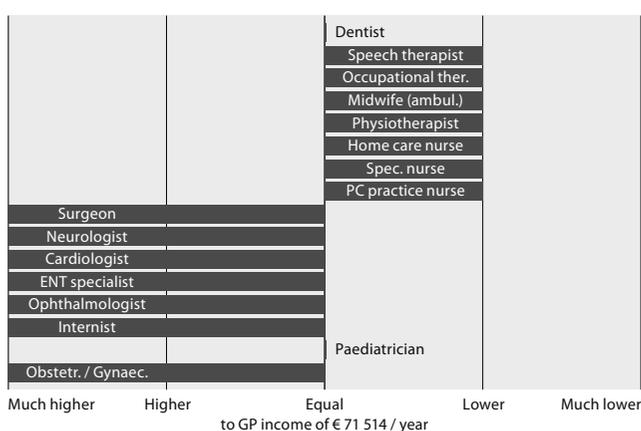
According to the OECD (2007), 19.7% of total expenditure on health is related to outpatient care, which is confirmed by the INAMI/RIZIV: 19% of the budget is devoted to primary health care and 81% to secondary care (De Ridder, 2010). Also, according to the OECD (2007), 3.9% of total expenditure on health is specifically dedicated to prevention and public health.

Primary care coverage is almost universal, since only people who are not registered with the INAMI/RIZIV do not get reimbursement for it. They represent less than 1% of the total population in Belgium and the federal government pays for their urgent medical care. There is a co-payment of between 10% (OMNIO status) and 33% for general practice services, depending on income, until the household reaches a ceiling (also depending on the income), above which all care is reimbursed (INAMI/RIZIV, 2008). For drugs, there is a co-payment too, depending on the therapeutic category. In 2008, the total amount of co-payments was €1850 million (or €175.50/insured/year). Of the total co-payments, 11.6% goes to general practice consultations and visits, 6.8% to ambulatory physiotherapy (De Ridder, 2010).

Belgian GPs are mostly paid on a fee-for-services scheme (share of fee-for-service in total general practice revenues 2000: 97.42%; 2010: 79.90%), but the introduction of the Electronic Medical Record also added some capitation since physicians get paid for the management of electronic medical records for each patient older than 50.

The net income of an average GP in Belgium is €71 514 per year (Kroneman et al., 2009). Medical specialists on average earn much more compared to GPs and the income of non-medical primary care professionals is on average lower (see Fig. A2.1).

**Fig. A2.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

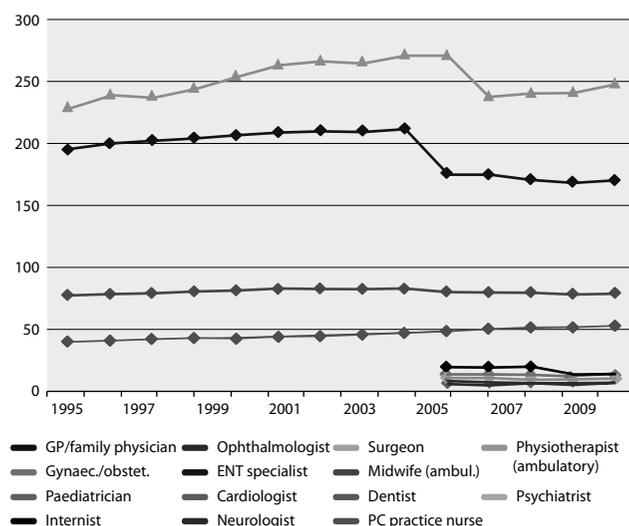
The primary care workforce in Belgium is essentially made up of GPs together with a few community nurses, who are involved with personal care, technical nursing procedures and psychosocial care. All specialists are accessible without referral, so there is no form of gatekeeping. There is not any precise definition of the tasks and duties of GPs in Belgium, except a law from 1967 on the continuity of care: GPs must refer their patients to a colleague with the same qualifications when they are not working (Royaume de Belgique, 1967). This is currently not checked extensively.

The total number of active GPs is 33% less than the total number of specialists (INAMI/RIZIV, 2010). Fig. A2.2 provides an overview of the development in supply of primary care professions in Belgium. Annual data is produced for the future capacity development in primary care workforce: GPs, dentists, physiotherapists and nurses, notably (SPF Santé Publique Sécurité de la Chaîne Alimentaire et Environnement, 2009). The average age of GPs is 53 years old and 71.24% of them are over 45 years old. A survey of Flemish-speaking GPs aged from 30 to 39 showed they work around 48.9 hours a week, with men working significantly more (54.3 hours) than women (45.8 hours) (Ryssaert & Gielis, 2009).

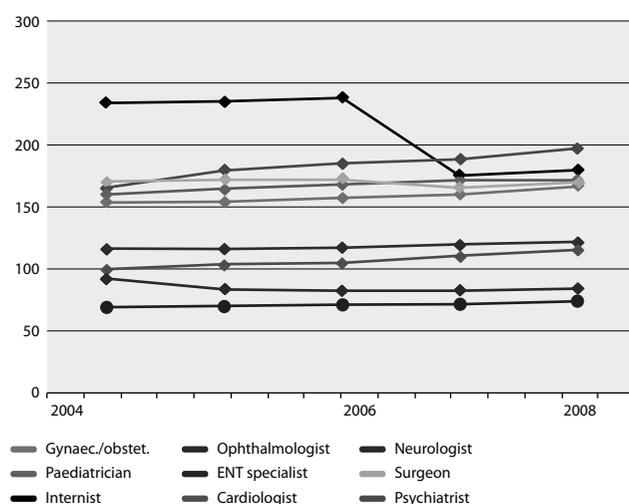
Of all medical graduates, 20–25% choose each year to enrol in postgraduate training in family medicine, which lasts two to three years (Lorant et al., 2008). Family medicine is a subject in the undergraduate medical curriculum, with trainees spending from a few days to one month in an ambulatory setting. Most (80%) medical universities offer a postgraduate training in family medicine, a small number of them also offering the training to become a PhD in general practice.

Medical associations are divided between the French – and the Flemish-speaking parts of the country. In the Flemish part, Domus Medica develops guidelines, education and scientific activities, while in the French-speaking part, the ‘Société Scientifique de Médecine Générale’ undertakes those tasks.

**Fig. A2.2a:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



**Fig. A2.2b:** The development in supply of primary care professionals (medical specialists only) per 100 000 inhabitants



Sources: INAMI/RIZIV, 2009 for crude numbers of professionals; Ecosanté, 2010 for total population in Belgium.

Notes: These figures only show professionals with some activity paid by INAMI/RIZIV. It includes some hospital-based professionals and does not include salaried ones. The definition of GPs for the INAMI/RIZIV statistics changed in 2005. Before that date, all physicians without a diploma for a specialty were counted as GPs and after it, only physicians who are certified as GPs. There was also another stricter change of definition in 2009, which means that numbers in those graphics are not comparable with other 2009 numbers in the rest of the country report. No count of each speciality physician was made before 2004.

### 3. Primary care process

#### 3.1 Access to primary care services

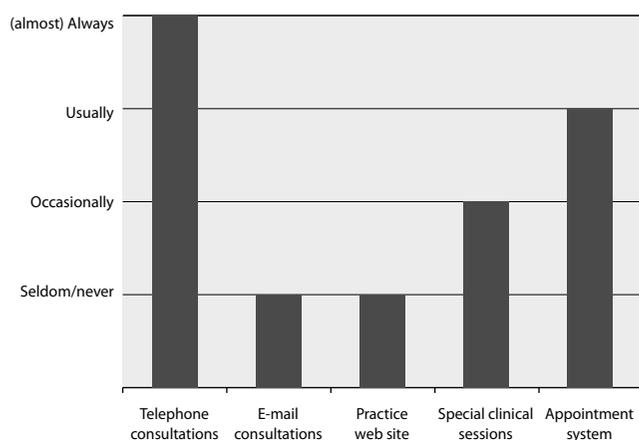
The mean density of GPs in Belgium is around 136 per 100 000 inhabitants, slightly more in the Walloon region (148) than in Brussels-Capital (140) or in the Flemish (128) regions. GPs are quite well distributed among

provinces and even in the province with the lowest GP-density, Limburg, the figure remains quite high: 118 per 100 000 inhabitants (Service Public Fédéral, 2008). As for rural parts of the country, accessibility to a GP does not seem to be a problem, first because rural areas in Belgium are always in proximity to a city network (due to the small size and high population density of the country) and, second, because even in the least populated areas in terms of density, the density of GPs is high (Luxembourg, Liège, Namur) (Service Public Fédéral, 2008; SPF Economie PME Classes Moyennes et Energie, 2010). However, it seems that some local shortages exist and national norms have been defined to characterize them: fewer than 90 GPs per 100 000 inhabitants and, for areas with fewer than 125 inhabitants per km<sup>2</sup>, fewer than 120 GPs per 100 000 inhabitants.

Most general practices offer telephone consultations and usually they have an appointment system in place. Electronic consultations and web sites are seldom in place (see Fig. A2.3). Concerning after-hours accessibility of primary care, the major mode of provision is practice-based services first and hospital emergency departments second. It is worth mentioning that there are 11 primary care cooperatives providing after-hours care and rather fewer after-hours primary care centres, which may be insufficient at the scale of the whole country. But when these services exist, they are well used.

Despite having a third-party payer system for the refundable part of medical expenses and the existence of health care centres (4% of all practice settings) where consultations are free, Belgian patients rate general practice care as less affordable than patients in surrounding countries. In 2008, 34.8% of the families declared they had difficulties fitting health expenditure into the household budget, with 14% of them being dissatisfied with general practice prices (European Commission, 2007). This may be because of the co-payment scheme (see section 2.2). Still, 65% of Belgians think that the quality of health care is better in Belgium than in the other Member States (De Ridder, 2010; European Commission, 2007).

**Fig. A2.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Source: Dobrev et al., 2008.

### 3.2 Continuity of primary care services

Having a global medical record with a GP is not mandatory but allows lower co-payments. Patients are free to choose any GP or centre to register with. It is estimated that 80% of Belgian patients visit their usual primary care provider for common health problems, but only 47% have a global medical record with their GP (INAMI/RIZIV, 2005).

Most GPs (83%) report having access to a computer in the consultation room and they use it for many aspects of their clinical activity: booking appointments, prescriptions, medical records, expert information research and communication with specialists (Dobrev et al., 2008). The continuity of relationship with medical specialists or after-hours provision services can be rated as between acceptable and good.

### 3.3 Coordination of primary care services

Currently, direct access to all medical specialties is possible in Belgium. For paramedical activities, a referral is normally required but direct access is also possible if visits are paid for privately.

It is estimated that 24% of GPs work in a group practice but there is no official follow-up of this kind of statistic. Nevertheless, it appears that more and more GPs, especially younger ones, choose to work in group practices and it seems that there is even a slight trend to work in mixed practices (Ryssaert & Gielis, 2009). At the whole primary care level, GPs have most

of their interactions with nurses, then with other GPs and community pharmacists. Medical specialists do not provide replaced (specialist care) or joint care with GPs in ambulatory settings. Most of their interactions with GPs are by mail or e-mail.

Health education is rare in Belgium and almost never includes nurses. Local health needs and priorities are not determined through epidemiological use of clinical patient records. However, every four years, the Belgian National Health Interview Survey is carried out with a national representative sample of the population, notably to establish the next health targets (Demarest et al., 2006).

### 3.4 Comprehensiveness of primary care services

Primary care facilities, especially general practices, offer a wide range of services, including diagnosis of acute conditions, follow-up of chronic conditions, technical acts, screening of various cancers and cardiovascular diseases (see also Table A2.2). Screening for sexually transmitted infections seems to be less common. Concerning health education, the mode of individual counselling is much more common than group sessions.

Ambulatory child care seems to be more in the hands of paediatricians than GPs, especially for routine paediatric surveillance or infant vaccinations, thanks to mother and child care centres and the medical school surveillance system. For acute conditions, GPs are equally involved. For women's health, GPs are less inclined to perform technical procedures, such as insertion of an IUD (intra-uterine device). Finally, common ophthalmological procedures, such as interventions on the cornea or funduscopy, are done by ophthalmologists rather than GPs.

Overall, 88% of all contacts with a GP are handled solely, without a referral, by the physician (Demarest et al., 2006).

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

In 2004, the Belgian population reported 4.5 contacts with a GP each year (4 times more for people over 75 than for those under 45), and 78% of them had at least one contact in the past year. The figures are comparable

**Table A2.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Woman aged 35 with psychosocial problems</li> <li>• Man with suicidal inclinations</li> </ul>	<ul style="list-style-type: none"> <li>• Man aged 28 with a first convulsion</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Wound suturing</li> <li>• Setting up an intravenous infusion</li> </ul>	–
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> </ul>	–
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> <li>• Counselling in case of problematic alcohol consumption</li> </ul>	–

Note:

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

in Flemish and Walloon regions, but in Brussels there is an underuse of general practice services (Direction opérationnelle santé publique et surveillance 2010) (see also section 4.2).

When interviewed in 2004, 47% of the Belgian population reported having taken a prescribed drug (by any physician) in the past two weeks, a figure that is higher in the Walloon region than in the Flemish part or in Brussels (Demarest et al., 2006). In 2007, 25.40 DDD (defined daily dose)/1000 inhabitants/day of antibiotics were prescribed by ambulatory physicians (both GPs and specialists), among the highest figures in Europe.

The quality of management of chronic diseases is variable. For diabetes, some indicators are encouraging, such as (in 2006):

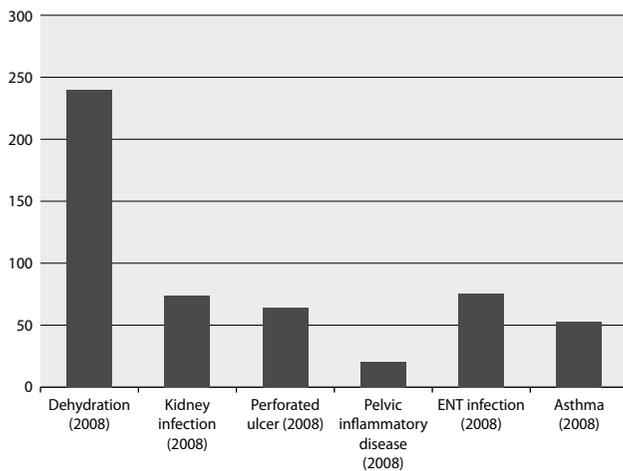
- 22% of adults with diabetes had a blood pressure above 140/90 mmHg
- 93% of overweight or obese people with known diabetes had their BMI measured in the past 12 months
- 82% of people with diabetes had an eye fundus inspection in the past 12 months.

But some indicators can be improved. For example, 69% of adults with diabetes still have a HbA1C over 7% and 39% of them have a cholesterol level > 5 mmol/l (Dutch Institute for Healthcare Improvement CBO, 2008).

Concerning COPD, around 30% of patients over 40 had undergone a spirometry during the past two years (Buffels, Degryse & Liistro, 2009).

Primary care sensitive hospital admissions are highest for dehydration and lowest for pelvic inflammatory disease in 2007 (see Fig. A2.4).

**Fig. A2.4:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



Source: Corens, 2007.

#### 4.2 Efficiency of primary care

Over a third (38%) of all contacts with patients in general practice are home visits (INAMI/RIZIV, 2005). GPs see their patients around 6.7 times each year (INAMI/RIZIV, 2005), a figure greater than that declared by patients: 4.6 per year (Demarest et al., 2006).

A visit to the practice lasts 10 to 30 minutes and a home visit between 20 and 40 minutes (INAMI/RIZIV, 2005).

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# 3 Bulgaria

*D.S. Kringos, P. Salchev*

## 1. The context of primary care

### Country and population

In 1945, Bulgaria was proclaimed a republic, and together with many other eastern European countries went down the socialist road of development. In 1989 Bulgaria became a democratic state, and in July 1991 a new Constitution was adopted. Bulgaria includes a territory of 110 910 km<sup>2</sup> and is situated in south-eastern Europe. It is divided into 28 regions (administrative areas) and 262 municipalities. The population (at the end of 2009) is 7.56 million people living mostly in cities (71.4%), with slight female predominance (51.62%) (NSI, 2009). A constant increase in the share of population over 60 years is observed (from 21.8% in 2000 to 24.3% in 2009). The relative share of population aged 0–19 years has dropped from 20.5% in 2004 to 19.1% in 2009. The ageing of the population is especially marked in villages, where 32.9% of people are aged 60 and over. In comparison with older EU Member States the relative share of people aged over 60 years in Bulgaria is significantly larger. As a result of a falling birth rate, increased mortality and unfolding emigration processes (in the period 1989–2009 more than 800 000 citizens emigrated), Bulgaria entered a period of negative demographic development, which led to a marked drop in total population and worsening of its fundamental demographic and social indicators.

### Development and economy

Bulgaria is a parliamentary republic governed by a National Assembly (Narodno Subranie) consisting of

**Table A3.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Bulgaria	EU <sup>1</sup>	Bulgaria	EU <sup>1</sup>	Bulgaria	EU <sup>1</sup>	Bulgaria	EU <sup>1</sup>	Bulgaria	EU
1995	5.3	7.6	285	1275.9	1036.7	740.9	345.81	292.7	n.a.	27.5 <sup>6</sup>
2000	6.1	7.9	372	1608.0	741.13	669.0	336.91	295.1	n.a.	28.3 <sup>5</sup>
2005	7.7	8.5	713	2150.9	641.17	604.6	364.31	316.0	19.62	26.3 <sup>4</sup>
2009	n.a.	8.8	n.a.	2788.2	n.a.	564.8	n.a.	321.6	n.a.	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Bulgaria	EU <sup>2</sup>	Bulgaria	EU <sup>1</sup>	Bulgaria	EU <sup>1</sup>	Bulgaria	EU <sup>1</sup>
1995	n.a.	575.1	13.6	12.5	15.72	15.7	5.5	6.6
2000	385.29	655.9	11.5	10.3	n.a.	17.7	n.a.	6.8
2005	403.56	682.7	8.1	9.5	n.a.	16.2	n.a.	6.8
2009	n.a.	745.5	n.a.	8.8	n.a.	15.6	n.a.	6.9

Source: Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO.

240 deputies who are elected for four-year terms. There are about 250 parties in Bulgaria (Karasimeonov, 2010). The governors of the 28 regions are appointed directly by the government. The 262 municipalities act as self-governing bodies. Mayors and members of municipal councils are elected at municipal elections. Since 1992, substantial responsibilities for health care, education and social affairs have been devolved to the municipalities.

Until 1989, Bulgaria was a Soviet country with a centralized economy. After 1989, a severe economic crisis occurred. Macroeconomic stability and sustainable economic growth was attained as of 1996 until the present. Economic growth in the period 1996–2008 was over 6%, driven by significant amounts of foreign direct investment. This was facilitated also by the fixed exchange rate of the national currency (initially to the German mark then to the euro). Bulgaria entered the EU on 1 January 2007. Successive governments have demonstrated a commitment to economic reforms and responsible fiscal planning, but the global downturn is reducing exports, capital inflows and industrial production. Corruption in the public administration, a weak judiciary and the presence of organized crime remain significant challenges. The GDP per capita grew slowly from PPP\$ 12 300 in 2007 to PPP\$ 12 600 in 2009. A high proportion of the population (14.1%) was living below the poverty line in 2003. Unemployment

rates have quickly increased from 6.3% in 2008 to 9.1% in 2009. Bulgaria ranked 53rd on the Human Development index in 2005 with 0.824.

#### Population's health

Life expectancy at birth in Bulgaria is 73.4: 69.8 years for men and 77.1 years for women – which is below the European average. The infant mortality was 8.6 deaths for 1000 living births in 2008 – among the highest in Europe.

Infant mortality continues to be higher in rural settings, and is especially high in regions with higher proportion of ethnic minorities. A positive development is the drop in infant and early neonatal mortality. At the same time, a high perinatal mortality is reported. Unfavourable in comparison to other EU countries are the data on stillbirth (7.3 per 1000 births for 2008) (National Centre of Health Information, 2010). Bulgaria has a relatively high share of stillbirths from mothers aged younger than 19 years, due to the fact that many pathological states causing intrauterine fetal death are not discovered in time. The share of mothers giving birth below the age of 16 is increasing, resulting in a higher risk of complications during pregnancy, birth and postnatal period for both mother and child (Ministry of Health, 2010a).

Leading causes of mortality traditionally continue to be heart diseases and cancer; among them the highest share of deaths are from stroke and ischaemic heart disease (respectively 31.4% and 20.2%). Comparison with other European countries shows that, despite the decreased mortality from heart disease, the standardized coefficient remains significantly higher in Bulgaria and in cancer – and has a tendency to increase.

Chronic diseases are on the rise, hand in hand with increased disability and disease, mainly because of demographic changes, aggravated pathology, social stress of poverty and unemployment and other external factors. According to a survey of the Index Foundation 22% of the population are considered chronically ill, of whom 34% were male and 66% female. Displayed chronic morbidity is about three times higher than the EU average and about four times more than the US (Index Foundation, 2010).

#### Characteristics of the health care system

The socio-political changes that have taken place in Bulgaria since 1989 have had a big impact on the health system. The previous “Semashko” model was based on the principles of universal coverage and free access at the point of delivery. The system was centrally planned and run, financed from general government revenue and characterized by almost complete public ownership.

Major reforms began in 1989 and by the mid 1990s the centralized, tax-based system was transformed into a decentralized compulsory health insurance system, with employee contributions and contractual relationships between the National Health Insurance Fund (NHIF) as a purchaser and health care providers. The NHIF acts as a single agency providing most of the funding. Through its 28 regional bodies (the regional health insurance funds), it finances the entire health care network for outpatient care, and since July 2000 it also finances the contracted hospitals. Every Bulgarian citizen is covered by the compulsory health insurance scheme to receive a basic benefits package of health services determined and reimbursed by the NHIF. Health care is provided in accordance with the National Framework Contract. Private insurers provide an alternative means of funding health care, as well as those drugs and treatments that are included in the state health insurance package. The main sources of health system financing are compulsory health insurance, state and municipality budgets, voluntary health insurance (VHI), household expenditure allocated

to the system as co-payments, fee-for-service or out-of-pocket expenses, and external resources allocated from donor organizations (e.g. World Bank, Structural Funds, etc.) and (inter)national NGOs (Georgieva et al., 2007).

The main stakeholders in the Bulgarian health system are the Parliament, the Ministry of Health, the NHIF and the Higher Medical Council. A number of other ministries own, manage and finance their own health care facilities, including the Ministry of Defence, the Ministry of Internal Affairs and the Ministry of Transport. Private practice has expanded significantly and now includes dental practices, pharmacies, physicians’ surgeries, laboratories, and outpatient clinics and polyclinics.

Primary health care is provided by GPs in private practice, group practice and/or in an outpatient department.

Health care facilities are organizationally autonomous structures. In accordance with the 1999 Health Care Establishments Act, outpatient care is provided by single and group practices, medical and dental centres and independent medical diagnostic centres. Physicians or centres contract with the NHIF in order to participate in statutory provision; any providers that do not sign contracts can provide private services on a fee-for-service basis. Inpatient care is provided by general and specialized hospitals, dispensaries, nursing homes and hospices, and hospitals providing acute, chronic, long-term care and rehabilitation. Table A3.1 shows that although the health care reforms of the 1990s saw a significant reduction in the number of beds, Bulgaria still has an extensive hospital network throughout the country that provides easy access to inpatient care. However, there is also an excessive and unnecessary use of beds. In 2005, 7.7% of the GDP was spent on health care, compared to an EU average of 8.5% in the same year. The overall health care consumption in Bulgaria is slightly lower compared to the EU average.

## 2. Structure of the primary care system

### 2.1 Primary care governance

The Ministry of Health is responsible for primary care in terms of determining the activities and quality. The NHIF and its regional branches are responsible for accounting and financing activities. Primary care has a specific budget, separate from other health care sectors.

Budget allocation by region is carried out at national level by the NHIF (NHIF, 2009b). Representatives of medical organizations of stakeholders (including associations of general practice) actively contribute to primary care policy development through working groups of the Ministry of Health, which is required by both the Health Insurance Act and Health Act. The Health Insurance Act prescribes involving professional organizations in the drafting and signing of the National Framework Agreement (a basic document for determining the activities and levels of payment for medical services) (NHIF, 1999). Public or community participation in the organization and provision of primary care is incidental and only occurs in the event of a problem. Particularly active in this direction are the representatives of local authorities – mayors and the National Association of Municipalities in Bulgaria (Foteva & Asenova, 2007; NAMRB, 2010).

In 2008, Parliament adopted the National Health Strategy 2008–2013 aiming to achieve accessible, timely and effective outpatient care (Ministry of Health, 2008a). The system of outpatient care includes primary and specialized medical treatment, medical diagnostic activities and highly specialized medical activity.

Primary care governance is currently faced with a number of challenges, including:

- expanding the functions and capabilities of GPs;
- improving the organization of work of GPs;
- encouraging the creation of group practices and the acquisition of the specialty general medicine;
- expanding access of patients to specialized outpatient assistance;
- improving coordination of activities between primary and specialized outpatient care and hospital care;
- raising the awareness of citizens about their rights and obligations as users of outpatient care services.

In the period 2008–2013, a number of policy measures are planned to address the current challenges. Regulations will be introduced that determine the number of patients served by a GP, and set criteria and requirements for conducting a review of clinical practice based on medical standards. Tools will be implemented for reporting clinical activity and evaluating the results. Even though there is currently an explicit governmental policy (National Health Map) that regulates the geographic

boundaries of health areas and the distribution of medical institutions in areas, there is still a need for further improvement in the accessibility of primary care. The Ministry of Health and local governments will need to create conditions and incentives for general practices active in remote and inaccessible regions in the country. This will include the establishment of mobile medical teams to provide primary and specialized medical care for difficult areas. The creation of group practices will be stimulated to ensure a continuous 24-hour service to the population. The National Health Strategy also sets out ways of enhancing cooperation and integration of general practice with other medical specialties (particularly paediatricians, obstetricians and gynaecologists, psychiatrists) and hospitals.

Nursing and midwifery structures will be implemented in outpatient care, given the current lack of mechanisms and incentives to attract nurses in serving patients in primary care. Criteria and indicators will be established for health care monitoring and control. Another policy priority area is improving the quality of postgraduate training and continuing training of workers in the system of outpatient care (Asenova & Foteva, 2007; Foteva & Asenova, 2007; Hristov & Ivanov, 2006; Markova, 2008; Ministry of Health, 2008a; NHIF, 1999; Zlatanova & Zlatanova, 2006).

The Health Law explicates the requirements of physicians to work in primary care. Every active GP needs to be registered at a regional health centre. Basically each physician can establish an individual or group practice in primary care, as long as they acquire the general medicine specialty within five years of the enactment of the Medical Institutions Act. After the expiry of this period registration at the relevant regional health centre for physicians who have not acquired the specialty of general medicine will be deleted (Ministry of Health, 1999). In 2009 this period was further extended by changing the law. Since the early 2000s less than a quarter of GPs have qualified as specialists in general medicine specialty, therefore the government has decided to extend the transition period.

The Ministry of Health, however, has not introduced an adequate legislative basis for the training of GPs. Currently, there is no uniform basis for training and curricula. Each university has its own curricula for training physicians and students in general medicine (Georgieva et al., 2007). The National Framework Agreement (a basic document for determining the

activities and levels of payment for medical services) regulates the minimum set of requirements for primary care facilities (NHIF, 2010).

Regional health centres monitor the quality of operation, and hygiene control authorities monitor compliance with standards of hygiene and the immunization calendar (Hristov & Ivanov, 2006; Naney, 2009; NHIF, 1999). The Ministry of Health has issued over the years a large number of legal documents and national programmes that often set different tasks for GPs. Due to the large number of documents and inconsistencies among them, GPs experience difficulties in implementing certain regulations of the Ministry of Health. Since the mid-2000s general medicine departments of universities and national associations of GPs have actively produced manuals and guidelines for the conduct of GPs regarding certain health problems (Asenova, Hristov & Ivanov, 2006; Chachevski, Dimitrova & Ivanova, 2006; Postadjian, 2008).

Patient rights, including for example informed consent and access to medical records have been consolidated in the Health Act and the Act on Protection of Personal Data (BCNL, 2002).

2.2 Economic conditions of primary care

In 2010, 6.04% of the health expenditures went on primary care, and 3% on prevention and public health (NHIF, 2009b). About 95% of Bulgarians are covered by the compulsory health insurance scheme to receive a basic benefits package of health services (including primary care) determined and reimbursed by the NHIF (NHIF, 2009a; Vekov, 2009).

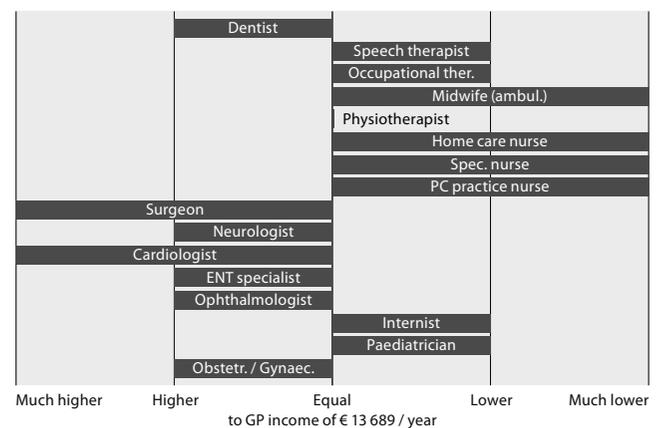
A national survey in 2007 showed that 16% of the respondents rated general practice care as not very or not at all affordable (European Commission, 2007). Patients pay 1% of the national minimum wage out of pocket for each appointment with the doctor, dentist or hospital. Women aged 60 years and men aged 63 years pay the amount of BGN 1 (€0.51) for each appointment. Patients pay 2% of the national minimum wage for each hospitalized day, with a maximum payment for 10 days per year. There is a specific group of patients (including minors and non-working family members, veterans and those who are socially disadvantaged and receiving social benefits) who are exempt from any out-of-pocket payments (NHIF, 1999).

According to the Medicines Act, the National Framework Agreement and other legal documents, each year the Ministry of Health determines the “positive list” of medicines, which specifies the level of co-payment for medicines by patients. For example, at the beginning of 2010 patients with diabetes, Parkinson’s and osteoporosis do not pay anything, while during the second half of 2010 they pay between 10 and 25% of the cost of the drug and the remainder is covered by health insurance (Ministry of Health, 2010b).

Of GPs, 13.4% are salaried employed. The majority of GPs (86.6%) are self-employed and reimbursed by the NHIF on a contractual basis according to the National Framework Contract. These contracts are based on monthly per-capita payments per insured person on the patient list of the primary care providers. There is also remuneration for working in sparsely populated and/or remote regions with unfavourable conditions and bonuses for provision of so-called “socially important” services, such as prevention services. Primary care providers are also paid on a fee-for-service basis for those patients who are not on their list. These practitioners are funded only from the NHIF and private out-of-pocket payments, and they do not receive any state funding. If primary health providers do not have a contract with the NHIF, all their revenue comes from fee-for-service payments, paid out of pocket by patients without any reimbursement from the NHIF (Georgieva et al., 2007; NHIF, 2009c).

An average GP has an annual income of €13 689 (in 2009) (Vekov, 2009). This is similar to the annual income of physiotherapists, and (much) higher than that of primary care nurses, internists, paediatricians, speech and occupational therapists, and ambulatory midwives, as shown in Fig. A3.1. Besides internists and paediatricians, all other medical specialists earn (much) more than GPs.

**Fig. A3.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

The core of the primary care workforce in Bulgaria is self-employed GPs, gynaecologists/obstetricians, paediatricians and dentists. All patients have direct access to these disciplines. Access to all other medical specialists requires referral from a GP (Foteva & Asenova, 2009; NHIF, 2009c; Valentinova, 2006a, 2006b).

**Fig. A3.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period

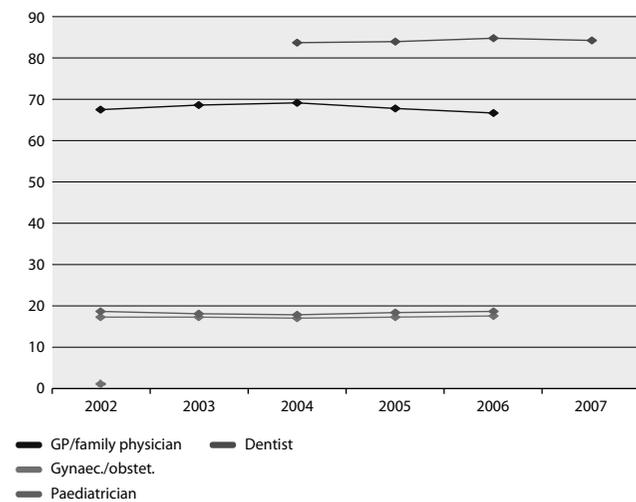


Fig. A3.2 shows that there is a slow but negative trend in the supply of all primary care professionals. From 2002 to 2006, the supply of GPs decreased by 3.1%, paediatricians by 2.5%, gynaecologists/obstetricians by 1.0%, and dentists (which have the highest supply) decreased by 0.2%. According to Eurostat, in 2006 the total number of active GPs as a ratio to the total number of active specialists was 0.32 (Eurostat, 2009). This ratio has increased to 0.6 in 2010, according to NHIF statistics. There are no recent public data available on primary care workforce capacity needs and development for the future.

The average age of GPs is 51 years; 75% are aged 45–55 years, and 15% are older than 55 years of age. The workload of a GP on average is 7.2 hours per day, working five days a week in 2009.

There are four medical universities in Bulgaria, and two medical faculties at other universities. Each university has its own curriculum to train physicians and students in general medicine. Postgraduate training in family medicine was first introduced in 1998. All four medical universities have a postgraduate training for GPs in family medicine. No postgraduate training for GPs

**Table A3.2:** Referrals to hospital

Directed by:	2007	2008	2009
GP	28.99	31.33	33.17
Specialist	29.49	28.81	30.42
Hospital	22.15	26.11	23.81
Emergency	15.18	13.75	12.60
Self-referral	4.20	0.0	0.0

Source: NHIF, 2010.

exists in the two separate medical faculties (BMA, 2009; Dimova & Dimitrova, 2006; Hristov & Ivanov, 2006). Family medicine is also a subject in the undergraduate medical curriculum. According to the regulations created by the state, undergraduate training in general medicine should be provided under a programme approved by the Faculty Council of 30 hours (15 hours of lectures and 15 hours of practical exercises), ending with an examination (Council of Ministers, 2008). Training leading to the general medicine specialty takes three years, and must be completed within six years (Ministry of Health, 2008b). There is no specific professional training for district or community nurses, or primary care nurses (Ministry of Health, 2006).

The common interests of GPs are protected by the National Association of General Practitioners in Bulgaria (NSOPLB), which has existed since 2000. This is a non-profit-making, voluntary, independent association of Bulgarian GPs and academics qualified in general medicine, organized into regional associations (NSOPLB, 2002). Since 2003, the magazine *General Medicine* has been published, which aims to provide access to information on general medical practice for all physicians and health professionals, and to offer a regular insight into ongoing research. Every issue of the journal is processed in the Bulgarian Medical Literature database as well as in EMBASE/*Excerpta Medica* as English summaries and keywords are standard.

There is no professional organization or journal designed specifically for nurses working in primary care in Bulgaria. All nurses are members of a professional organization of nurses, midwives and health care professionals (Parliament, 2007).

**Table A3.3:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 35 with psychosocial problems</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man aged 28 with a first convulsion</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Congestive heart failure</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Rheumatoid arthritis</li> <li>• Cancer (in need for palliative care)</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from the cornea</li> <li>• Fundoscopy</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Breast cancer screening</li> </ul>	–
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> <li>• Counselling in case of problematic alcohol consumption</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

### 3. Primary care process

#### 3.1 Access to primary care services

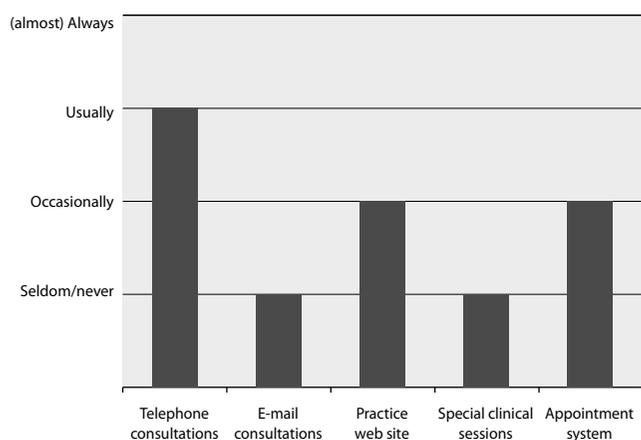
The general decline in supply of primary care providers is making access to primary care a real concern (see Fig. A3.2). According to national norms, there are shortages of GPs in some regions (Vekov, 2009). In particular, the population living in remote and inaccessible areas and those from vulnerable groups face serious difficulties in obtaining services of sufficient volume and quality from primary care providers, and have insufficient access to medicines due to a lack of pharmacies (Ministry of Health, 2008a; Voinova, 2009). The most marked difference in supply of providers is between Shumen

region, with a density of 48 GPs per 100 000 population, and Pernik region with a density of 98 GPs per 100 000 population. Urban areas have on average a density of 68 and rural areas on average 56 GPs per 100 000 population (National Centre of Health Information, 2010).

GPs are obliged by law to spend a minimum of six hours per day in their ambulatory practice, and two hours on home visits (NHIF, 2009c). A GP performs on average eight home visits per week. Fig. A3.3 shows that primary care practices usually use telephone consultations, occasionally use appointment systems or have a practice

web site, and rarely perform e-mail consultations or offer special clinical sessions for certain patient groups, such as diabetics (Dobrev et al., 2008).

**Fig. A3.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Overall, a national survey in 2007 showed that 82% of the population find it easy to reach and gain access to GPs (European Commission, 2007). Patients particularly face difficulty in obtaining needed medical services at night and on weekends (Ministry of Health, 2008a). After-hours primary care is differently organized across regions in the country. In big cities, GPs working in single practices or organized in a group of practices look after their patients on out-of-hours schedules. In a small number of cities (e.g. the capital city, Plovdiv, Varna and Pleven) companies employ physicians to take over the provision of after-hours primary care (outsourcing). In small towns and rural areas, hospital emergency departments take care of all health problems after office hours (Foteva & Asenova, 2007; Ivanova, Karaslavova & Tufkova, 2008).

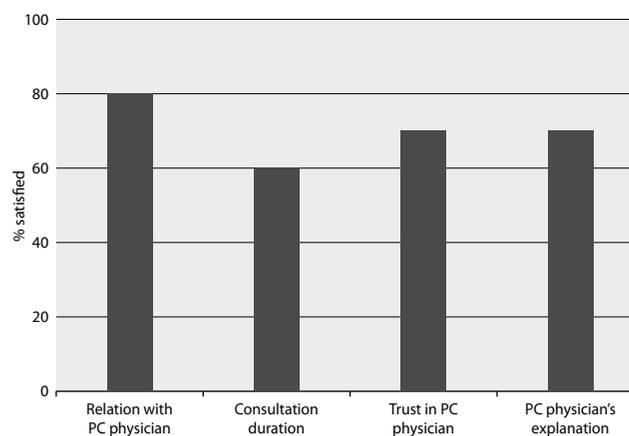
### 3.2 Continuity of primary care services

GPs have on average 1381 patients (in 2010) on their practice list for which they are responsible. About 80–90% of the population usually see the same primary care provider for their common health problems. Based on the Health Insurance Act, patients have the right to free choice of GP, specialist and hospital. Patients can change their GP twice a year (NHIF, 1999). Nevertheless, in remote and sparsely populated areas patients experience difficulties in the choice of GP, particularly

when practices have a large number of patients on their list, and there are few support personnel (Ministry of Health, 2008a).

Fig. A3.4 shows that patients are generally satisfied with the quality of their relation with their primary care physician, in terms of trust and explanations given. They are less satisfied with the consultation duration in primary care, even though the average consultation with a GP takes 20 minutes (Vekov, 2009).

**Fig. A3.4:** Patient satisfaction with aspects of care provision



By signing the contract with the NHIF GPs are obliged to maintain clinical records for each patient on their list and for each visit in the practice. One copy of the ambulatory file is given to the patient and one is kept at the practice for inspection by the supervisory bodies of the NHIF (NHIF, 2009c). Their clinical record system allows providers to generate lists of patients by risk groups, but they are rarely used to identify health needs or priorities for health policy at regional or local level. Almost all GPs have a computer in their office, which is used for multiple purposes, such as financial administration, medicine prescriptions, keeping medical records and communication with other providers (Dobrev et al., 2008; Konstantinov et al., 2006; Ognianov, 2007).

Patient consultations by specialists is on the basis of the referral system (Foteva & Asenova, 2009; NHIF, 2009c). As Table A3.2 shows, in 2009 33% of all patients referred to hospital are referred by GPs. It is common practice that a GP receives feedback on the consultations carried out by other care providers through the medical documents brought by patients to their general practice. For some types of laboratory information the information

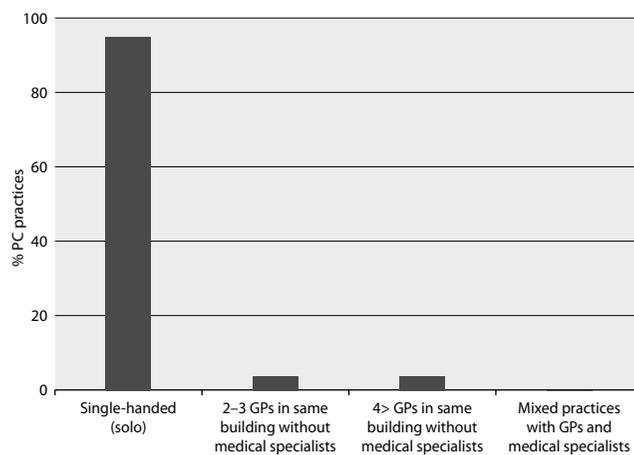
can be obtained electronically (NHIF, 2009c). There is practically no collaboration between GPs and medical specialists (see also section 3.3).

### 3.3 Coordination of primary care services

GPs are gatekeepers of the health care system and refer patients to specialists, laboratory tests, diagnostic procedures and hospitals. This is enshrined in the National Framework Agreement (Foteva & Asenova, 2009; NHIF, 2009c).

Single-handed practices are the predominant form of work organization in primary care (see Fig. A3.5). Only 5% of the GPs work in group practices with other GPs (Bistra, 2003; Georgieva et al., 2007).

**Fig. A3.5:** Shared practice



Team work in primary care among different primary care professionals is not common practice. GPs usually collaborate with their practice nurse, but only occasionally have face-to-face meetings with other GPs, midwives/birth assistants or primary care physiotherapists. GPs seldom collaborate with community pharmacists, social workers or community mental health workers (Valentinova, 2006b). As a result, new care arrangements – such as task substitution with nurses – do not occur in Bulgaria. Nurses are not involved in caring for diabetics, for example, or providing health education. This is due to the lack of targeted education in this area, as well as specialized training for nurses working in primary care (Georgieva et al., 2007).

There is no established system of feedback and real cooperation between primary care providers and medical specialists. GPs only rarely ask advice from medical

specialists on specific clinical cases. And it is not common practice that medical specialists visit primary care practices to provide joint care or to give clinical lessons for GPs. The only contact GPs and medical specialists have occurs via the referral letters from GPs to medical specialists. There is no compulsory system of reporting back from secondary care to primary care after treatment or consultation.

Community health surveys are only incidentally conducted at local or regional level to improve the quality and responsiveness of primary care (Chachevski, Dimitrova & Ivanova, 2006).

### 3.4 Comprehensiveness of primary care services

The NHIF sets limits for the number of referrals allowed from GPs to medical specialists. Around 85–90% of the total patient contacts are handled solely by GPs without referrals to other providers (Chachevski, Dimitrova & Ivanova, 2006; NHIF, 2009c). GPs in Bulgaria offer a large range of services, including diagnosis and follow-up for chronic conditions (see Table A3.3). It seems they are less inclined to undertake technical acts such as fundoscopy, insertion of IUDs or wedge resection of ingrown toenail.

GPs are also involved in health promotion activities, screening for breast and cervical cancer, and infant vaccinations but less so in preventive tasks such as cholesterol level checking, screening for HIV/AIDS, allergy vaccinations.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

In 2009, GPs provided 795 prescriptions per 1000 patient contacts (Vekov, 2009). The use of antimicrobials for systemic use in ambulatory care in 2007 was 17 DDD per 1000 inhabitants per day (Deschepper et al., 2008; ESAC, 2009).

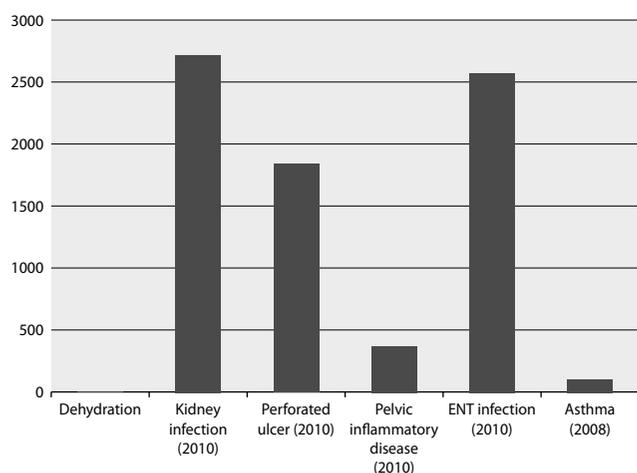
There are around 520 000 diabetic people in Bulgaria (8.3% of the population). Approximately 316 000 (61%) have been diagnosed with the disease, and it is estimated that about 204 000 (39%) remain undiagnosed. In Bulgaria, there are about 377 000 (6.1%) people with prediabetes – a condition that may progress to clinical diabetes if not diagnosed and treated

promptly (Endokrinolog Bulgaria, 2010). GPs carry out prophylactic examination annually for patients with diabetes. Patients with diabetes, COPD or asthma are included in the list for dispensation from general practice and they receive a monthly examination carried out by GPs. Dispensation is a specific form of active surveillance and treatment of patients with chronic diseases or who are at risk (e.g. children and pregnant women, patients with neoplasms, patients with rare diseases or with a chronic heart disease). On the basis of this examination GPs prescribe medicines for patients, who are reimbursed by the Ministry of Health (Ministry of Health, 2004).

Bulgaria does not have a national screening programme, except for breast cancer. About 100 mammography units are in place taking mammograms. GPs' Public Health Care package includes manual breast examination of women aged 31–69 on an annual basis, and risk assessment. All women included in the risk groups should receive a preventive check-up exam (including mammography) once a year by a specialist (breast surgeon) according to the National Framework Contract (signed annually between the Bulgarian Medical Association and the NHIF).

Based on extrapolation of statistics and expert evaluations, Fig. A3.6 shows relatively high avoidable hospital admissions for patients with a diagnosis of kidney infection, ENT infection and perforated ulcer.

**Fig. A3.6:** Estimated number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



#### 4.2 Efficiency of primary care

It is estimated that 10% of all general practice–patient contacts are telephone consultations, and 15% are home visits. The average consultation length in general practice is 20 minutes. Patients on average visit their GP 3.4 times a year.

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# 4 Cyprus

*G. Samoutis, P. Tedeschi*

## 1. The context of primary care

### Country and population

Cyprus is a south-eastern Mediterranean island covering an area of 9251 km<sup>2</sup> with a population estimated at 798 000 inhabitants (Eurostat, 2010). The population density is 86.2 per km<sup>2</sup>. The largest city and capital of Cyprus is Nicosia (approximately 200 000 residents). The crude birth rate in 2009 was 12.2 per 1000 inhabitants and the crude death rate in 2009 was 6.7 per 1000 inhabitants. The natural growth of the population was 5.5% (Eurostat, 2010). The population aged 65 and over in Cyprus is 12.7% of the total population (in 2009) (Eurostat 2010), which is significantly lower than the EU average.

Cyprus is a divided island. In general, the government has no access to information concerning the northern part of the island which is under Turkish army control. Consequently, unless otherwise stated, all figures and discussions in this report refer to those areas of the Republic of Cyprus in which the Government of the Republic of Cyprus exercises effective control. Cyprus joined the EU in 2004.

### Development and economy

Cyprus's political system is a presidential democracy (Republic of Cyprus) established by the 1960 Constitution. The President is the chief of the state and head of government, elected by universal direct suffrage for a five-year term. The President appoints the

**Table A4.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Cyprus	EU <sup>1</sup>	Cyprus	EU <sup>1</sup>	Cyprus	EU <sup>1</sup>	Cyprus	EU <sup>1</sup>	Cyprus	EU
1995	4.9	7.6	1283.7	1275.9	n.a.	740.9	247.0	292.7	21.0	27.5 <sup>6</sup>
2000	5.8	7.9	1924.0	1608.0	n.a.	669.0	259.4	295.1	16.0	28.3 <sup>5</sup>
2005	6.3	8.5	2626.7	2150.9	n.a.	604.6	260.7	316.0	n.a.	26.3 <sup>4</sup>
2009	6.2	8.8	3064.2 <sup>7</sup>	2788.2	n.a.	564.8	287.0 <sup>7</sup>	321.6	n.a.	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Cyprus	EU <sup>2</sup>	Cyprus	EU <sup>1</sup>	Cyprus	EU <sup>1</sup>	Cyprus	EU <sup>1</sup>
1995	433.5	575.1	n.a.	12.5	7.9	15.7	1.9	6.6
2000	422.5	655.9	n.a.	10.3	8.4	17.7	2.0	6.8
2005	439.1	682.7	n.a.	9.5	7.9	16.2	2.0	6.8
2009	467.8 <sup>7</sup>	745.5	n.a.	8.8	9.2 <sup>7</sup>	15.6	2.1 <sup>7</sup>	6.9

Sources: EU and Cyprus average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year 2008.

Council of Ministers and the Cabinet of the Republic of Cyprus. Each minister exercises executive power on all subjects within his ministry's domain. The House of Representatives is elected every five years by universal direct suffrage. The House of Representatives enacts legislation. Administratively, the country is divided into six districts: Ammochostos, Kyrenia, Larnaca, Limassol, Nicosia and Paphos. The GDP per capita calculated for 2010 by the (IMF, 2010) is PPP\$ 27 713.592. The unemployment rate is 7.1% of active population (in July 2010). The Human Development Index for Cyprus is estimated at 0.914 which gives the country a rank of 32nd out of 182 countries with data. Between 1990 and 2007 Cyprus's Human Development Index rose by 0.43% annually from 0.849 to 0.914 today (UNDP, 2009).

#### Population's health

The age structure in Cyprus is: 0–14 years: 17%, 15–64 years: 73.1%, 65 years and over: 9.9% (2009 estimation) with the overall male to female ratio of 0.97/1.

The life expectancy at birth for the total population is 77.5 years, 74.7 years for men and 80.4 years for women (2009 est.). The total fertility rate is 1.45 children born/woman (2009 est.) and the Infant mortality

rate is: 9.7 deaths/1000 live births (total population), 11.6 deaths/1000 live births (male), 7.8 deaths/1000 live births (female) (2009 est.).

The main causes of death in Cyprus in 2008 were: (1) diseases of the circulatory system – 38.8%, (2) malignant neoplasms – 21.2%, (3) diseases of the respiratory system – 6.9%, (4) diabetes mellitus – 6.3%, (5) external causes of injury and poisoning – 6.0% (Ministry of Health of the Republic of Cyprus, 2010).

#### Characteristics of the health care system

Cyprus is in the process of implementing a comprehensive National Health Insurance Scheme (NHIS) (starting with outpatient care). A semi-governmental organization, namely the Health Insurance Organization, is responsible for the design, implementation and running of the new NHIS. Cyprus is currently moving towards the introduction of a primary care driven, universal health care coverage system for the entire population, with quality improvement processes as an important incorporated component. However, for the time being, Cyprus operates in a dual system of health care delivery, offering publicly funded health care services to low – and medium-income citizens, while the rest, mostly well-off part of the society, utilizes services from the

private sector, covering their expenses either from private health insurance schemes or through out-of-pocket compensation. The majority of public as well as private primary care settings are characterized by underuse of contemporary information technologies, limited monitoring systems, and variable use of clinical standards of care such as chronic disease management guidelines and patient satisfaction surveys.

At the moment the government, as an employer, provides medical insurance to its employees through the public health sector. Employer and trade union sponsored schemes also provide medical insurance to their members, such as those organized by semi-government organizations and large private companies (e.g. banks) that offer health care coverage (including at least in-hospital insurance) to employees and their families. Furthermore, there is the Government Regular Employees Health Care and Welfare Scheme, administered by trade unions and governed jointly by representatives of the Ministry of Health, workers' unions and others. This situation will change fundamentally when the NHIS is fully implemented. Under the new regime, the public health system will receive funding from the compulsory health insurance contributions and will also provide comprehensive medical care to the entire resident population at all levels of health care. The NHIS proposed for Cyprus aims at equity in finance and universal provision of health care with efficient delivery, high standards and containment of costs. Every person will be registered with a personal doctor (a GP for adults and a paediatrician for those under 16 years old). The selection of specialist and hospital will be the patient's choice (public or private). As long as the specialist of their choice complies with the system parameters there should be no out-of-pocket costs.

The share of health expenditure to GDP for Cyprus is well below the EU average and just above 6% of GDP (2009), with 2.8% and 3.4% being the corresponding shares of the public and private sector (see Table A4.1). In contrast, in the EU, average total health care expenditure based on the same estimates was 8.9% of GDP, with 6.8% and 2.1% being the public and private sector health expenditure to GDP, respectively. The low percentage of health expenditure to GDP in Cyprus can be attributed to the following factors:

1. lack of a universal national health insurance scheme, which consequently leads to a very high out-of-pocket payment from patients, estimated at 50% of the total expenditure;
2. young structure of the population as shown above (one of the highest percentages in Europe);
3. limited spending on medical research (one of the lowest percentages in Europe).

The 43% of the population in Cyprus who are not covered for pharmaceutical care must pay out of pocket for all medicines, in contrast to many other EU countries. Consequently, the pharmaceutical market is divided into two distinct sectors, public and private, which supply prescription and over-the-counter products, but operate independently at all levels. Cyprus has 435 private pharmacies and 43 public ones (2009). As a percentage of total health expenditure, pharmaceutical expenditure was 21% in Cyprus, compared to 17.8% on average in OECD countries (2002). Finally, during 2008, 66 429 patients were admitted for treatment and discharged from the general hospitals, compared with 63 344 in 2007, recording an increase of 4.9%.

## 2. Structure of the primary care system

### 2.1 Primary care governance

Primary care in Cyprus is generally underdeveloped. A clear vision on the development of primary care in Cyprus has been set out after the preparation of the new NHIS by the Health Insurance Organization (HIO). A document on primary care reform was issued by the HIO in 2009. The policy paper at the moment has been transformed into a draft law, which is at the final stage of being approved by the Cyprus Parliament. At present the Ministry of Health is struggling to manage the pressure on public primary care due to the financial crisis by setting up new public primary health care centres in order to alleviate the problem. The current situation in primary care is that young doctors cover the rural areas. After serving in rural areas they can choose an urban primary care centre. Following the introduction of the NHIS, primary care will be covered by personal-family physicians and paediatricians. The governmental primary care centres will only operate in areas that will not be covered by personal physicians. Importantly,

according to the NHIS, personal physicians will be divided into adult and children's (up to 16 years) personal physicians (APPs and CPPs respectively).

Currently, no separate budget exists for primary care but, under the new NHIS, there will be a separate budget for primary care. The primary care budget will be clearly divided into two other budgets: the primary care budget for APPs and the primary care budget for CPPs. The primary care budget will be distributed to APPs and CPPs based on capitation, chronic disease management quality indicators and other incentives such as adoption and meaningful use of electronic health records.

At present, public primary care centres report to local hospitals' medical directors. Under the new NHIS plan this will change and all the private primary care centres (which will be the vast majority) will be decentralized and autonomous, reporting only to the HIO. At present, very few responsibilities have been decentralized to the local level; the use of an appointment system is decided by the primary care centre itself but the number of personnel, service provision and priority setting is still undertaken by the regional hospital's General Director and the Ministry of Health Medical Department. At present, no specific unit for health care inspection exists although, under the new NHIS, a unit for waste, fraud and abuse will be set up, with dual responsibility for primary and secondary care.

There is a requirement for a specialization in family medicine. Notwithstanding this, due to the fact that there is a lack of trained family physicians, the government employs in primary care a number of physicians who do not have special training in family medicine. Thus there is tremendous impact on the quality of care offered by public primary care centres. Based on the reform, all family physicians must provide documentary evidence of training in primary care in order to be contracted under the new NHIS. There is a variety of specialties in public primary care, however, since although the majority of doctors are GPs or family physicians, there are also non-specialized physicians, surgeons and urologists who work in primary care.

According to the new NHIS, the requirements for setting up a practice will specify the number of square metres for premises (a minimum number is set), the building infrastructure (access for disabled patients, waiting room) and the primary care infrastructure (ECG, blood pressure measurement devices, point of care tests, etc.). Currently

clinical guidelines are under development based on the adoption process. In the new NHIS plan (implementation date 2012), the connection of clinical guidelines, quality indicators and financial incentives (pay for performance) is considered an important tool in improving the quality of care. Moreover, the implementation according to the same plan of electronically based disease prevention and management programmes, and connecting them with financial incentives, is also expected to improve the quality of public and private primary care in Cyprus. Finally, the publication of primary care patient-centred outcomes, the encouragement to form group practices, the introduction of an electronic health records system and the overall enhanced medical leadership role of physicians will significantly improve the quality of care.

Disease management guidelines have been produced in primary care but these have not been introduced officially, monitored or incentivized, nor has their implementation and impact on quality of care been assessed. The new NHIS will introduce electronic disease management programmes incentivized through extra reimbursement of personal physicians (PPs). The model of production of clinical guidelines for the new NHIS is based on the adoption of European guidelines (for example, from NICE [National Centre for Health and Care Excellence]). A procedure to process patient complaints is available only in secondary care, and specifically in public hospitals. There is, however, a complaint process which has been designed for the NHIS, covering all levels and aspects of care through different means (written, e-mail, telephone, etc.).

## 2.2 Economic conditions of primary care

The expenditure on outpatient care as a percentage of total expenditure on health (Eurostat, 2009) is estimated at 26.2% (in 2006), but an estimate of current expenditure on primary care is not feasible due to the fact that more than 50% of primary care services are delivered in the private sector. Total expenditure on primary care and outpatient specialists within the new health care system is estimated at approximately 40% of total health expenditure. Preventive care and health promotion account for 0.6% (in 2006) of all expenditures on health, which is very low number in comparison with other European countries (Eurostat, 2009). Although 80% of the population is covered for primary care and secondary care costs, only 50% of these people are estimated to use the public services. The majority of public primary care patients are elderly people and the great majority

of the younger population visit private medical centres, either hospital based or solo or group practices, and are either paying out of pocket or through private or work-based medical insurance. The long-awaited health care reform is expected to change this situation, since all the population will be covered to visit their doctor for free, with a free choice of either a private or a public primary care centre.

The private sector primary care physicians are self-employed and those in the public sector are salaried employees. In the private sector, PC physicians are paid on a fee-for-service basis, either out of pocket or through various insurance schemes. No regulatory mechanism exists except for the setting of an indicative minimum fee by the Cyprus Medical Association. The coverage of visits, lab tests and drugs varies between the different insurance schemes. In the public sector the co-payment for such services is extremely low, less than 1%, and there is almost 100% subsidization, with a very low fixed co-payment for medicines prescribed in primary care. The range of publicly available drugs is limited, with a number of generics included. Currently the proportion of the population uninsured for medical expenses may be about 10% of the population (all the low-income population is covered by public sector) and 80% of the population is covered by the services provided by public primary care centres. However, the quality of care differs significantly between the private and public sectors. Thus the vast majority of well-off patients use the private sector, with direct access to specialist care. Based on the current system, GPs are paid a flat salary, although, under the forthcoming health care reform, GPs will be paid a monthly salary tightly related to both the number of their patients and to performance indicators (e.g. quality indicators). No performance-related salary schemes exist currently in public primary care but a pay-for-performance scheme is planned with the introduction of the new NHIS.

Self-employed GPs are on fee-for-service payment. The (estimated) gross annual income of a “mid-career” GP in the public sector is approximately €55 000 while in the private sector the amount varies greatly, depending on the area served, qualifications, inpatient care and so on. The average income of a mid-career qualified GP in the public sector is the same as other specializations. However in the private sector there is a tremendous difference in favour of other specialists. In public general practice centres all the

above costs, including infrastructure, is covered by public funds, while in the private sector the infrastructure costs of the practices are covered by the physicians themselves.

### 2.3 Primary care workforce development

In the public sector there is direct access to the majority of specialists. Recently, the Ministry of Health has stopped the direct access of patients to specific specialties with a long waiting list, for example in orthopaedics. Notwithstanding this, primary care in Cyprus does not provide a gatekeeper service, resulting in high expenditure, duplicate expenses, lack of coordinated care and lack of continuity of care, lack of preventive services, etc. The average age of practising GPs in public primary care is estimated to be approximately more than 50 years, as the public primary care sector is currently underdeveloped and the majority of newly qualified physicians seek a career in other specializations. It is worth noting that since patients have direct access to specialist care in the public sector, public primary care physicians are mainly providing treatment for minor illness, prescriptions and lab test orders.

There is currently no government policy in place to increase the number of GPs in Cyprus. On the contrary, there was a 20% decrease in GPs from 1995 to 2000. A primary care workforce capacity plan is warranted in the near future in order to secure a sufficient number of trained GPs for the new NHIS. Moreover, there is an urgent need to update the GPs’ specialty programme. The general-family medicine specialization programme in collaboration with the Cyprus Ministry of Health was initiated in the early 2000s and has not been revised since then. This is a four-year training in general/family medicine. No academic medical institution exists at the moment in Cyprus, although there is a plan to establish a public Cyprus medical school and a private medical school. The General Medicine National Association is the official association of the four-year officially trained general-family physicians, and has 60 GPs as members. The association mainly undertakes educational and scientific activities, as well as contacts with the Ministry of Health in order to support the development of family medicine in Cyprus. Notwithstanding this, there is another association of general physicians, of which about 165 GPs are members, mainly those over the age of 50, who are physicians who have worked in primary care for many years but have not gone through the four-year official training scheme.

### 3. Primary care process

#### 3.1 Access to primary care services

It is estimated that Cyprus has 0.31 GPs per 1000 population so, due to the fact that there is a significant shortage of four-year trained GPs, the government is recruiting non-general practice trained physicians to general practice posts. No problems exist in the availability of medicines in rural areas, because every rural health centre has its own pharmacy. Usually the opening hours for public primary care centres are 7:30 pm to 2:30 pm and once a week the public primary care centres are open till 6 pm. Private primary care physicians usually work from 9 am till 8 pm, five days a week. Out-of-hours coverage is usually carried out through telephone consultation with private GPs and by private and public hospital emergency rooms. Home visits are not performed by public GPs, and only occasionally by private GPs, while community nurses are only rarely involved in home visits. Cancer patients are cared for at home by a non-profit-making organization which provides specialized cancer nursing. Patients in public primary care usually do not pay anything or an insignificant symbolic amount, while in the private sector there is always a payment, either out of pocket or via private insurance coverage.

Private primary care sector practices always provide telephone consultations, occasionally e-mail consultations, occasionally have web sites and have appointment systems for the majority of patient contacts. On the contrary, none of the above usually exists in the public primary care sector, or very rarely. According to a European study (Dobrev et al., 2008), 3.5% of GPs in Cyprus (mixed sample, private and public) e-mail patients about administrative or health issues (in 2007) and 14% of GPs (only private GPs) were found to have their own practice web site. The same study showed that 95% of patients find it easy to reach and gain access to GPs (a collective response representing both public and private practice).

#### 3.2 Continuity of primary care services

In the current primary care system, GPs do not yet have a patient list system. As a result, the care received is fragmented and a significant waste of resources is observed (e.g. double ordering of lab tests, lack of continuity of care, lack of a universal electronic medical record). Based on the deployment of the health care reform plan (NHIS) the GPs will have a patient list,

are expected to be more motivated to initiate disease management programmes, will have certain specific quality indicators and will be remunerated based on target accomplishments (tier 2–3).

It is estimated that almost all GPs keep clinical records. However, the vast majority of them diverge significantly in the quality of clinical records. The reform will introduce a universal electronic health records system that will be able to secure continuity of care, quality of medical data, data mining and data monitoring processes (Samoutis et al., 2007). About 54% of all GPs have access to a computer in the consultation room (Dobrev et al., 2008), but private sector GPs' use is estimated to be much higher (estimated 70–80%). However, they do not use a comprehensive electronic medical record. Public sector GPs rarely use a computer and a paper-based health record is mandatory. Based on the current situation, patients can freely choose their public GP and centre, and, according to the new NHIS, patients will also be free to choose their GP and they will be able to change their GP every six months, should they wish to do so. However, in reality, restrictions in enjoying the right of free choice of a general practice centre still apply in rural areas, due to the limited choice. Based on a recent study (Samoutis et al., 2010), the vast majority of patients in public primary care are very satisfied with the care provided. The expectations of patients visiting public health care centres are very low compared with those patients visiting the private primary care centres. This may be explained by the fact that the average age, socioeconomic status and educational background of public primary care users is significantly different from those who use the private sector.

#### 3.3 Coordination of primary care services

Primary care patients do not usually need a referral to access the majority of other medical specialties, paramedical or nursing care, although referral is required for specialties with a long waiting list such as orthopaedics. The majority of private primary care physicians are single-handed, whereas the majority of public primary care physicians are located in primary care health centres in a group practice environment. In a very limited number of public health centres there is a skill-mix model in place. The only specialties visiting public health centres are psychiatrists but, the multidisciplinary concept is underdeveloped and the only multidisciplinary teams that exist are in the mental health services, and GPs are not participating or engaged.

**Table A4.2:** GPs' involvement in delivery of various primary care services\*

<b>GPs' estimated involvement in the provision of:</b>	<b>GPs are "always" involved in the provision of care regarding:</b>	<b>GPs are "seldom or never" involved in the provision of care regarding:</b>
First-contact care (from a list of 10 items)	–	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 18 asking for oral contraception</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Woman aged 35 with psychosocial problems</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man aged 28 with a first convulsion</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Mild depression</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Wedge resection of ingrown toenail</li> <li>• Removal of sebaceous cyst from hairy scalp</li> <li>• Excision of warts</li> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from the cornea</li> <li>• Fundoscopy</li> <li>• Joint injection</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Screening for HIV/AIDS</li> <li>• Influenza vaccination for highrisk groups</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Testing for sexually transmitted diseases</li> <li>• Cervical cancer screening</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

There is no comprehensive information technology (IT) system in place. However, based on the new NHIS, Cyprus will be able to deploy a fully comprehensive IT system with electronic health records, enabling the collection and data mining of clinical patient records data (Samoutis et al., 2007). Community health surveys conducted to improve the quality and responsiveness of primary care take place incidentally at a local or regional level.

### 3.4 Comprehensiveness of primary care services

The average number of patient contacts that are handled solely by GPs in Cyprus without referral to other providers is not known, although it is estimated that this patient contact number is not high. In public primary care the percentage of patient contacts handled solely by GPs without referrals to other providers is significantly smaller than in the private sector. GPs in Cyprus usually offer a medium to small range of services such as glucose test, dressings and bandages, otoscope examination,

ECG (see Table A4.2). However, no gynaecological examination is offered (nor is a cervical cytology test, sexually transmitted disease screening, etc.) nor a simple peak flow meter measurement.

GPs also deal with a narrow array of first-contact common health problems. Paediatric first-contact health problems are managed by paediatricians, just as are gynaecological first-contact problems are managed by gynaecologists. Inevitably, the public GPs are usually managing first-contact health problems mainly in the elderly low – to medium-income population. Concerning follow-up appointments, due to the lack of continuity of care the vast majority of patients with chronic diseases are followed by specialists in parallel with GPs, resulting again in duplication of costs and resources. The array of activities performed by GPs or general practice nurses is also limited; for example they do not perform any minor surgery procedures such as resection of ingrown toenail, wound suturing or excision of warts, nor any ophthalmological (fundoscopy, removal of rusty spot from the cornea) or gynaecological procedures (insertion of IUD).

Concerning preventive activities in primary care undertaken by GPs, the same pattern is followed as above, with only a moderate array performed in primary care, such as cholesterol level checking and influenza vaccination, whereas the majority are undertaken by specialists (cervical cancer screening by gynaecologists, sigmoidoscopy by gastroenterologists, etc.). Mother and child and reproductive health care is not at all in the scope of GPs' care.

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

As stated above there is a significant room for improvement in primary care in Cyprus. The great majority of newly qualified physicians are not following general practice specialization, resulting in a limited number of trained GPs. The total number of physicians in Cyprus is 2226 (Cyprus Medical Association 2008 data) with only 255 GPs (9.8%) among them (219 in urban areas and 36 in rural areas). Only 25% of GPs have gone through the four-year training in family medicine. Notwithstanding this current structure, however, the new NHIS will change the picture and primary care will be brought to the centre of the health care system.

The average number of prescriptions annually provided by GPs has not been estimated. In 2007 a total of 16 million boxes of drugs was prescribed in total in the Cyprus health care system. Cyprus physicians in general are among the higher prescribers in Europe and about 33.9 DDD/1000 inhabitants/day of antibiotics were prescribed by ambulatory physicians in 2007 (ESAC, 2009).

Concerning the quality of management of chronic diseases, data are only available from a pilot study in public primary care (Samoutis et al., 2010). Based on this study, approximately 30% of hypertensive patients were on target, whereas for the HbA1C target for patients with diabetes the success rate was approximately 55%. Preventive care data for Cyprus are limited. The screening coverage of women ever having had a mammogram in 1997 was estimated at 16.0% (patients do not need a referral to receive mammography because Cyprus has a national screening programme that targets women aged 50–69 every two years). Pap test screening is performed by gynaecologists in Cyprus and the screening rate is estimated to be relatively high, although no official data exists.

The average length of consultation in public primary care is estimated at an average of 15 minutes, whereas in the private sector it is on average 20 minutes. The above data are expert estimations and not official statistical data as at the moment these data do not exist. It is estimated that 10–20% of public primary care contacts end in a referral, whereas this proportion is 5–10% in private primary care.

##### 4.2 Efficiency of primary care

The health care system in Cyprus in general is not efficient, as medical care is purchased from the private primary care sector by a large number of households whose medical needs are already covered by the state primary care, creating a wasteful duplication in the provision of health care services. Moreover, primary care in Cyprus is not functioning as the gatekeeper of the health system since the GP is not the coordinator of care. Additionally, the array of activities performed in primary care has been limited due to the very high number of other specializations and because general practice is not a respected specialty compared with the others, resulting in a very limited number of newly qualified physicians following it as a specialty.

In Cyprus, public primary care physicians do not perform any home visits and, additionally, private primary care physicians only very rarely visit patients at home. Measures towards fostering home visits of GPs are an imperative. Additionally, at the moment in public primary care no telephone consultations are performed, while in private primary care it is estimated that 70% of all GP–patient contacts are telephone consultations (2009). This relatively high number of telephone consultations may be due to the fact that Cypriots have the Mediterranean temperament (need for close contact) and that the patient pays out of pocket, thus increasing demands on the physicians.

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# 5 Czech Republic

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## 1. The context of primary care

### Country and population

The Czech Republic is situated in central Europe and it is landlocked with a territory of 78 866 km<sup>2</sup>. In 2008 the population was 10.47 million, of whom women accounted for 50.1%, those under 15 years 14.2% and 14.7% of the population were 65 and older. The natural increase was 1.4/1000 inhabitants in 2008 (Czech Statistical Office, 2009; Ústav zdravotnických informací a statistiky ČR, 2009).

### Development and economy

The Czech Republic is a parliamentary republic with the Parliament elected in a general election. The term of office of the lower chamber of the Parliament lasts four years, the term of office for Senate lasts six years with one-third replacement every two years. The President is elected by Parliament for a five-year term of office. The Czech Republic has been an EU member state since 2004. The Human Development Index in 2010 was 0.821 – which put Czech Republic at 28th position in the world, while GDP per capita (in US\$ PPP) was 24 630.6 (2008). In 2007 the emigration rate was 3%, the main destination being western European countries. In the third quarter of 2010 the registered unemployment rate was 8.6% (Czech Statistical Office, 2009; Klugman, 2010; OECD, 2009).

**Table A5.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Czech Republic	EU <sup>1</sup>	Czech Republic	EU <sup>1</sup>	Czech Republic	EU <sup>1</sup>	Czech Republic	EU <sup>1</sup>	Czech Republic	EU
1995	n.a.	7.6	n.a.	1275.9	n.a.	740.9	n.a.	292.7	21.1	27.5 <sup>6</sup>
2000	6.5	7.9	980	1608.0	780	669.0	337	295.1	20.0	28.3 <sup>5</sup>
2005	7.2	8.5	1477	2150.9	760	604.6	356	316.0	22.1	26.3 <sup>4</sup>
2009	6.8 (2007)	8.8	1626 (2007)	2788.2	730 (2007)	564.8	357 (2007)	321.6	21.8 (2008)	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Czech Republic	EU <sup>2</sup>	Czech Republic	EU <sup>1</sup>	Czech Republic	EU <sup>1</sup>	Czech Republic	EU <sup>1</sup>
1995	n.a.	575.1	n.a.	12.5	n.a.	15.7	7.4	6.6
2000	759	655.9	8.7	10.3	19.1	17.7	6.6	6.8
2005	810	682.7	8	9.5	21.0	16.2	6.3	6.8
2009	801 (2007)	745.5	7.7 (2007)	8.8	20.3 (2007)	15.6	5.1 (2008)	6.9

Source: Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010); Czech data are based on: Ústav zdravotnických informací a statistiky ČR (2000, 2005, 2008); OECD (2009, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO.

## Population's health

In 2008 life expectancy at birth was 74 years in males and 80.1 in females, while at age 65 life expectancy was 15.1 years in males and 18.4 in females. The infant death rate in 2008 was 2.8 deaths per 1000 live births. Cardiovascular diseases caused 45% of the standardized death rate of men and more than one-half of mortality of women, while malignant neoplasms caused about 27.5% of the standardized death rate. Following these were external causes (injuries and poisonings) and diseases of the respiratory system. The main disease burden was caused by arterial hypertension, coronary heart disease, mental disorders (mainly neurosis and affective diseases), allergy and diabetes (Czech Statistical Office, 2009; Ústav zdravotnických informací a statistiky ČR, 2009).

## Characteristics of the health care system

All citizens are insured under general health insurance. Health insurance companies are partially competing, mainly in the field of contract rules with health care providers. GPs can sign a contract with multiple health insurance companies to provide services to their

patients. Since 2008 patients are obliged to co-pay for all consultations and hospital stays to an established upper yearly limit. The number of outpatient consultations in general practice offices was similar to the EU average with significant decrease in 2008 after patient co-payments were introduced (see Table A5.1). The number of physicians as well as the ratio of GPs has remained stable through the 2000s (OECD, 2010; Ústav zdravotnických informací a statistiky ČR, 2001, 2006, 2009; WHO Regional Office for Europe, 2010).

## 2. Structure of the primary care system

### 2.1 Primary care governance

There is no clear policy document describing the current role or future development of primary care in the Czech Republic. Similarly, equitable distribution of primary care facilities and providers is not regulated by any explicit governmental policy. Within the organizational structure of the Ministry of Health there is no special department dealing exclusively with the problems of primary care. Responsibility for primary care service provision is

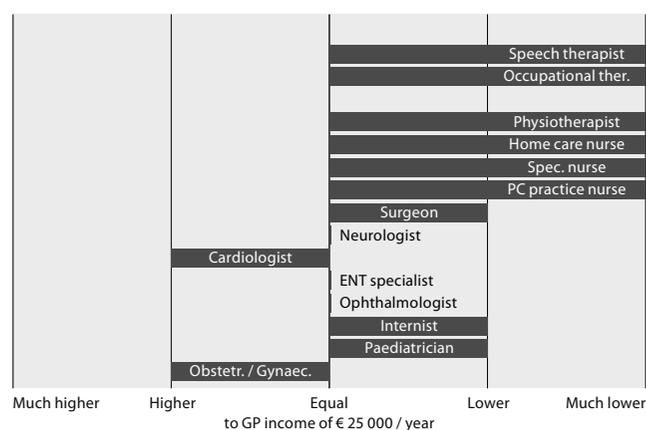
decentralized in the Czech Republic and lies in the hands of district authorities (Krajski Úřad). Stakeholders, mainly representatives of health insurance companies or organizations of medical professionals contribute to primary care policy development, mainly through regular consultations. Primary care facilities are mostly owned by local authorities. This ownership status allows local communities to influence the organization and provision of primary care services. Primary care control is the duty of local authorities. There is no special institution dealing with this issue at the state level. Only physicians who completed specialization in general practice for adults or children and have signed a contract with the insurance company are allowed to practise in primary care settings. The contract is also required for operating a primary care practice. Regularly issued and updated clinical guidelines are the main tool for improving the quality of primary care services. Most of them are issued by the Czech Society of General Practice. Patients' rights are secured by law and include informed consent, patient access to their own medical files, confidential use of medical records and procedures to process patient complaints in primary care facilities (Haskovcová, 1992; Nys et al., 2007).

## 2.2 Economic conditions of primary care

Primary care expenditures account for only 4.7% of the total health care budget. However spending on all outpatient services is equal to 24.4% of total health expenditures. Additionally, in 2007, 2.2% of health care expenditures were devoted to preventive and public health services (OECD, 2009). By law, all Czechs are covered by health care insurance, including general practice services (Sbírka zákonů ČR [Parliament of the Czech Republic], 1992a, 1992b, 1997). Co-payment for medical services exists in the Czech Republic, including for the services of GPs or prescriptions issued by them. Adults have to pay for each visit CZK 30 (Czech Koruna) (€1.20), with the annual upper limit of co-payment for persons below 65 being CZK 5000 (€205) and CZK 5500 (€225) for those who are 65 or older (Sbírka zákonů ČR [Parliament of the Czech Republic], 1997). Over 95% of GPs are self-employed with a contract with health care insurance companies; about 5% are hired and salaried by other physicians; and less than 1% work for public authorities, usually receiving a flat salary. Self-employed GPs are remunerated on the basis of a mix of capitation and fee-for-service payment. It is estimated by national primary care experts that gross annual income (excluding practice expenses) of a mid-career GP is equal to €25 000. The OECD however indicates that an average annual

income of a self-employed GP in 2006 was much higher at 51 512 (in US\$ PPP) (OECD, 2009). Income data for salaried GPs is unavailable. Income of GPs is comparable to income of neurologists, ENT surgeons or ophthalmologists, higher than income of internists, paediatricians or other allied health care personnel, however lower than income cardiologist or gynaecologist (see Fig. A5.1).

**Fig. A5.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



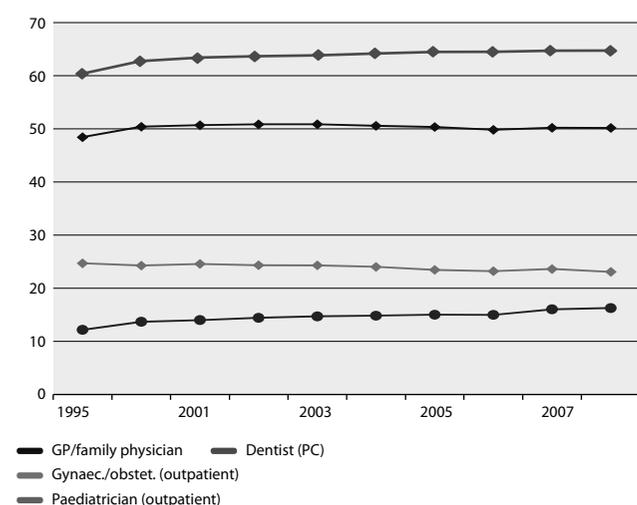
## 2.3 Primary care workforce development

Patients in the Czech Republic have direct access to GPs, nurses and physiotherapists working in primary care settings. A referral letter is also not needed for gynaecologists, paediatricians, ophthalmologists, ENT specialists or surgeons. In 2007 the average age of practising GPs was 53.4 years and on average Czech GPs work 40 hours a week, including 25 hours in the office. Their tasks or duties are not described in any law or policy document. In 2009, 10% of medical graduates chose family medicine as their future specialization and enrolled in vocational training in this field. Between 2003 and 2007 the number of practising GPs was reduced by 1.9% (see Fig. A5.2). There are two separate groups of GPs, who never work in combined practices: GPs for adults (*všeobecné praktické lékařství*) and practitioners for children and adolescents (*praktické lékařství pro děti a dorost*) serving patients up to 18 years of age. From here on we will refer to both groups together as “GPs”.

Altogether in 2008 there were 7663 professionally active GPs (for adults and for children and adolescents) and they constituted 21% of the whole population of physicians in the Czech Republic (see Fig. A5.2) (OECD, 2009, 2010; Ústav zdravotnických informací a statistiky ČR, 1996, 2003, 2008). There are no data available on

workforce capacity needs and its development in the future. Vocational training in family medicine was first introduced in 1978 and is run by a special institution not linked to the universities. The postgraduate training programme in family medicine lasts three years and half of this time is spent by trainees in primary care settings. In total, all eight medical universities provide undergraduate medical education in family medicine and among them there are three university departments of family medicine. Primary care nurses do not have separate vocational training. The Czech Society of General Practice, with 4000 members, works under the umbrella of the J.E. Purkyne Czech Medical Association and deals with education, research and professional development of GPs. There are separate unions of practising GPs for adults and children, defending the financial and material interests of GPs. A scientific and educational journal for GPs titled *Practicus (Practitioner)* is published 10 times a year with 6000 copies per issue. A purely scientific journal *Prakticky lekar (Practising Physician)* is issued monthly and publishes scientific papers for all specialities. *Medicina po promoci (Postgraduate Medicine)* is published bimonthly and contains mainly educational articles. Medical Tribune is published occasionally and contains mainly news and legal information. Primary care nurses have neither a national organization nor a professional journal dealing with their issues.

**Fig. A5.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period

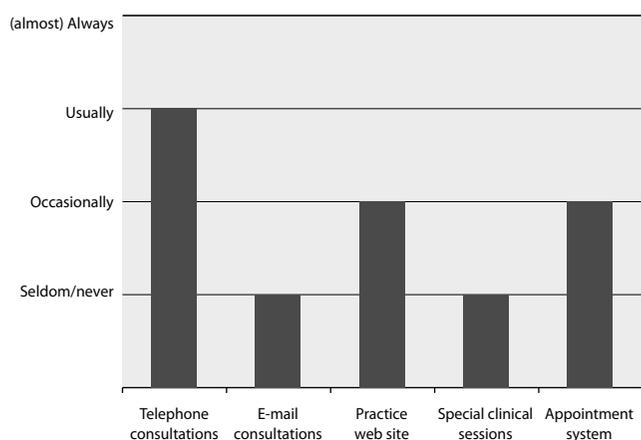


### 3. Primary care process

#### 3.1 Access to primary care services

In 2007 there were nearly 70 GPs (about 20 for children and 50 for adults) per 100 000 Czech inhabitants (see Fig. A5.2) (OECD, 2009, 2010; Ústav zdravotnických informací a statistiky ČR, 2008; WHO Regional Office for Europe, 2010). No precise data on regional differences in medical workforce distribution are available and data on differences between rural and urban regions also do not exist. However experts agreed that some shortage of GPs exists in some regions. There is no shortage in access to community pharmacists. General practices are open five days a week on average for five hours – the exact number of working hours depends on contracts with health insurance companies and the size of the patient list. Official data are unavailable on home visit rates; however, experts estimate that GPs in rural regions make home visits about 5–10 times per week, and about 1–5 times a week in the cities. Most GPs usually offer also telephone consultations to their patients (see Fig. A5.3). In 2007, 32% of GPs had a web site with information for patients. In the same year 6.9% of GPs reported use of e-mail to contact patients about administrative or health issues. Group consultations are seldom, or even never, provided (Dobrev et al., 2008). An appointment system for the majority of patient contacts is only occasionally present in Czech practices. Out-of-hours services are organized by local authorities and GPs are obliged to provide these services. The forms of provision vary in different regions – it may be on rotation basis or by finding substitute GPs. Patients are normally expected to pay part of the cost for home visits or visits to the GPs' office, or to specialists, and for medicines prescribed by them. In 2007 only 5% of patients rated GPs' care as unaffordable, while 83% of them found it easy to reach and gain access to GPs.

**Fig. A5.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



### 3.2 Continuity of primary care services

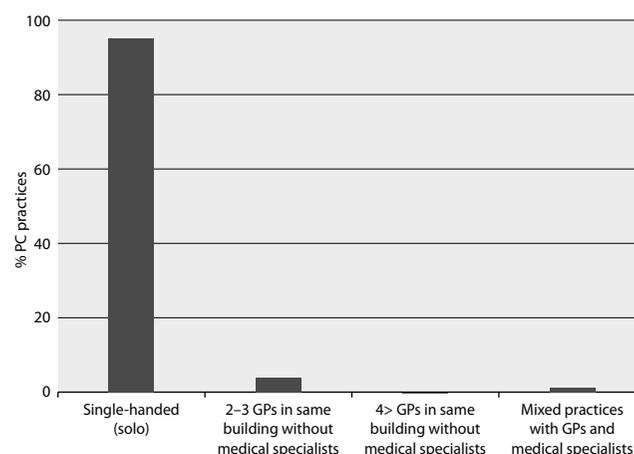
All Czech inhabitants are listed with their primary care physician. In 2007, the average list size of a GP for adults was 1613 patients, for a GP for children 952 patients, for a gynaecologist 3397 and a for dentist 1700 patients (Ústav zdravotnických informací a statistiky ČR, 2008). It is estimated that 90–95% of patients visit their usual primary care provider for their common health problems. All GPs keep patient records routinely and in 2007 about 80% of them reported regular use of computers in their practices. Computers are mainly used to keep medical records (66%), to issue prescriptions (67%) or deal with administrative problems (67%). Computers are rarely used to book appointments (3%), to seek expert information on the Internet (26%) or to communicate information to specialists (5–6%) or pharmacists (Dobrev et al., 2008). Whenever necessary, GPs issue referral letters with relevant information on diagnostics and treatment procedures performed, and normally they receive information within 24 hours about services provided to their patients by out-of-hours services. Specialists always communicate with the referring GP after providing a consultation. Patients are free to choose any GP who has a contract with an insurance company. However, data on patients' satisfaction is unavailable.

### 3.3 Coordination of primary care services

Patients do not require a referral letter to see gynaecologists, paediatricians, ophthalmologists, cardiologists, practice nurses or dentists. To see a physiotherapist, a specialized nurse or a home care nurse a referral letter is needed. Other specialists are also

available by referral, unless a patient pays out of pocket for a visit provided privately. Most GPs run solo practices (see Fig. A5.4). Only about 4% run group practices of two or more doctors. Very few (about 1%) share the practice with other medical specialists. GPs have regular face-to-face meetings with practice and home care nurses as well as with pharmacists. Meetings with social workers occur only occasionally, while meetings with physiotherapists or mental health workers occur seldom or never. Nurses do not lead diabetes clinics or perform other forms of health education. Medical specialists do not visit GPs in their practices either to provide joint care or services normally available in hospitals. However usually they are involved in lectures or other forms of clinical teaching for GPs. Patients' clinical records are hardly used at regional or local level to identify health needs or priorities for health policy in Czech Republic. Also community health surveys to improve the quality and responsiveness of primary care are only incidentally conducted at local or regional level.

**Fig. A5.4:** Shared practice



### 3.4 Comprehensiveness of primary care services

It is estimated that 80–90% of patients' contacts with GPs are handled solely by them without further referrals to other providers. These are the majority of first contact and uncomplicated internal medicine complaints, preventive activities (vaccination in adults, and screening for cardiovascular diseases and sexually transmitted diseases), and selected psychiatric and psychological problems (e.g. alcohol abuse; see Table A5.2). Surgical procedures are usually provided by specialists. Routine paediatric care and surveillance of children as well as childhood vaccination is always provided by GPs for children and adolescents. Individual counselling is almost always provided by GPs to patients with poor physical

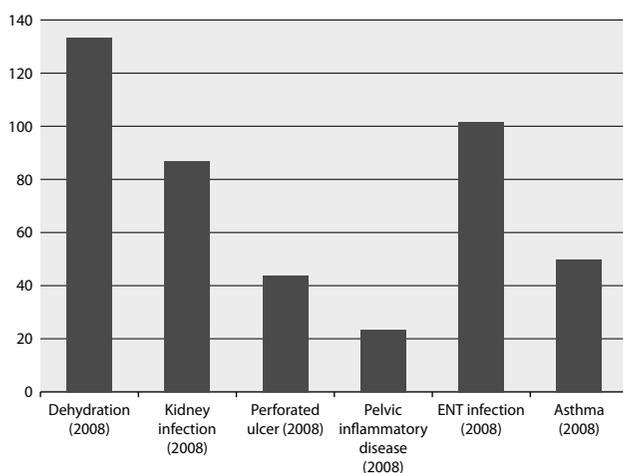
activity and usually also to smokers, people who are obese or alcohol abusers. This kind of counselling is provided by other specialists too, including endocrinologists, pulmonologists, internists or psychiatrists. GPs in Czech Republic are not involved in any form of group health education for patients with any specific problems.

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

There are no reliable data about the number of prescriptions issued by GPs per patient per year. However it is known that in 2007, in ambulatory settings, 16.8 DDD of antibiotics per 1000 inhabitants per day were prescribed (OECD, 2009). The rate of avoidable hospital admission (per 100 000 citizens/per year) are shown in Fig. A5.5. In 2008 the crude percentage of the population with diabetes who had an HbA1C >7.0% was 44.7 (Cebolla & Björnberg, 2008). More specific indicators for age or risk categories are unavailable. Similarly, data on lung function measurements performed in individuals with COPD or asthma are missing. Almost all of the population of infants is reported to be vaccinated against diphtheria, tetanus, pertussis, hepatitis B, mumps and rubella (with vaccination rates over 97%) (OECD, 2009, 2010). In 2007 42% of women aged 50–69 had at least one mammogram (OECD, 2009; Von Karsa et al., 2008) and 38.8% of women aged 45–69 had a Pap smear (cervical cytology) test performed in a two-year period (Institute of Biostatistics and Analyses, 2010; OECD, 2009). Most of these preventive activities were performed by gynaecologists rather than by GPs.

**Fig. A5.5:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



#### 4. Efficiency of primary care

In 2008, Czech GPs provided 5.1 consultations per capita per year (Ústav zdravotnických informací a statistiky ČR, 2009). Official data on referrals or home visits are not available. It is estimated that about 20% of patient contacts were telephone consultation.

#### Acknowledgements

The authors would like to express their thanks to all experts who agreed to provide information about primary care in Czech Republic. We are very grateful to our expert and colleague – GP – Dr Svatopluk Byma – President of the Czech Society of General Practice. His practical knowledge and position in the General Practitioners Society was extremely helpful in gathering valuable information. We would like to thank Dr Norbert Kral, assistant at the Department of General Practice, for his contribution to our research. Special thanks are also addressed to Dr Pavel Vepřek at the Department of Strategy and Development, Czech Republic General Insurance Company, who clarified legal and financial issues regarding the health care system in the country. The authors would like to thank – for their warm welcome and fruitful cooperation – the Department of International Affairs and the EU in the Ministry of Health of the Czech Republic. Some crucial information was available only through the kind and professional help of Dr Vlasta Vrchoťová, Dr Helena Sajdlová, Ing. Michaela Průchová and Ing. Ivan Popovič.

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**Table A5.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Man aged 28 with a first convulsion</li> </ul>	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 18 asking for oral contraception</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	–	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Insertion of IUD</li> <li>• Fundoscopy</li> <li>• Joint injections</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination</li> <li>• Screening for HIV/AIDS</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Routine paediatric surveillance of children up to 4 years (by GPs for children and adolescents)</li> </ul>	–

Sources: Expert interviews.

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

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# 6 Denmark

*T. Hasvold*

## 1. The context of primary care

### Country and population

Denmark is the smallest of the Nordic countries. It consists of one large peninsula and several islands and has a land border only with Germany in the south.

Denmark is a constitutional monarchy with a parliamentary system of government whose head is the Prime Minister. It has a state-level government and local governments in five regions and 98 municipalities. Denmark has been a member of the EU since 1973. The country covers 43 098 km<sup>2</sup>, most of it is cultivated flat land. By 2010 there were 5.5 million people living in Denmark with a population density of 127.9/km<sup>2</sup>.

The net migration rate is 2.48 migrants/1000 population. The total age structure in Denmark is: 0–14 years: 18.1%, 15–64 years: 65.8%, 65 and over: 16.1%. The population growth rate is 0.28% and 87% of the population live in urban areas.

### Development and economy

The GDP per capita is \$36,000 (2009). The Human Development Index is 0.955, ranking Denmark as 16th in the world with an increase of 0.29% annually over the last 25 years (UNDP, 2009).

All children are enrolled in primary schools, with an average of 9.7 years of schooling of adults. The unemployment rate in 2009 was 3.6%.

**Table A6.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Denmark	EU <sup>1</sup>	Denmark	EU <sup>1</sup>	Denmark	EU <sup>1</sup>	Denmark	EU <sup>1</sup>	Denmark	EU
1995	8.1	7.6	1869	1275.9	490	740.9	268	292.7	16.9	27.56 <sup>6</sup>
2000	8.3	7.9	2383	1608.0	430	669.0	291	295.1	22.2	28.35 <sup>5</sup>
2005	9.5	8.5	3152	2150.9	400 <sup>8</sup>	604.6	332	316.0	20.8	26.34 <sup>4</sup>
2009	9.8 <sup>7</sup>	8.8	3540 <sup>7</sup>	2788.2	317 <sup>9</sup>	564.8	342 <sup>7</sup>	321.6	20.0 <sup>7</sup>	25.53 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Denmark	EU <sup>2</sup>	Denmark	EU <sup>1</sup>	Denmark	EU <sup>1</sup>	Denmark	EU <sup>1</sup>
1995	654	575.1	6.1	12.5	n.a	15.7	n.a.	6.6
2000	1011	655.9	5.4	10.3	n.a	17.7	n.a	6.8
2005	782	682.7	4.5	9.5	n.a	16.2	n.a	6.8
2009	789 <sup>7</sup>	745.5	n.a	8.8	n.a	15.6	n.a	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010). Denmark: European Health for All database (WHO Regional Office for Europe, 2010) and Nomesco/Nososco databank (Hospital beds, 2007) (2011).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year 2007. <sup>8</sup> Year 2003. <sup>9</sup> Year 2007.

### Population's health

The total life expectancy is 78.3 years (males 75.9 and females 80.7). The fertility rate is 1.89 in 2008 and the birth rate is 11.96 births per 1000 population (WHO Regional Office for Europe, 2010). The death rate is 10.16 deaths per 1000 population in 2006 (WHO-HFA) and the infant mortality rate is 3.6 per 1000 live births in the same year (WHO Regional Office for Europe, 2010).

Death rates from diseases of the circulatory system are 193.47 per 100 000 population. According to *The public health report Denmark 2007*, the main public health concerns are smoking habits, alcohol consumption and physical inactivity among young people (Kjøller, Juel & Kamper-Jørgensen, 2007). Among young people, 10% suffer from chronic illnesses. Among adult and elderly people, obesity and high blood pressure and other long-standing illnesses are expected to increase.

Maternal mortality rate was 7.69 per 100 000 live births in 2008 (WHO Regional Office for Europe, 2010). As of 2002 cardiovascular diseases and cancer were the leading causes of death. Denmark's cancer rates (3.73% in 2007) were the highest in the EU, together with Finland, Norway and Czech Republic (WHO Regional Office for Europe, 2010). In 2008, there were only 6 reported cases of tuberculosis per 100 000 people. HIV incidence

was 5.6 per 100 000 in 2007 and deaths from AIDS 0.4 per 100 000 in 2006 (WHO Regional Office for Europe, 2010; OECD, 2010).

### Characteristics of the health care system

Denmark's health care system has retained the same basic structure since the early 1970s. The Ministry of Interior and Health (created in February 2010) deals with the administration of hospitals and personnel, while primary care facilities, health insurance, and community care are the responsibility of the Ministry of Social Affairs. Costs are borne by public authorities, and high taxes contribute to these costs. The number of physicians per 100 000 is comparable to the European average, the number of hospital beds is considerably lower (see Table A6.1). The number of hospital beds, as in other EU countries, has undergone a major decline. De-institutionalization of psychiatric patients has contributed significantly to this trend. The ratio of doctors to population, by contrast, has increased during this period.

The health care system in Denmark is mainly tax based and publicly provided. Only a small but increasing percentage (5% in 2002) of the population has complementary private insurance to cover dentistry and pharmaceutical co-payments.

Danish citizens may choose between two systems of primary health care: medical care provided free of charge by a doctor chosen by the individual for a year and by those specialists to whom the doctor refers the patient; or complete freedom of choice of any physician or specialist at any time, with state reimbursement of about two-thirds of the cost for medical bills paid directly by the patient. Most people opt for the former system. Some pharmaceuticals are subsidized by the state. Responsibility for the public hospital service rests with regions' authorities, each of which is allotted one or two larger hospitals with specialists and two to four smaller hospitals where medical treatment is practically free of charge. State-appointed medical health officers, responsible to the National Board of Health, are employed to advise local governments on health matters. Public health authorities have waged large-scale campaigns against tuberculosis, venereal diseases, diphtheria and poliomyelitis. The free guidance and assistance given to mothers of newborn children by public health nurses has resulted in an infant mortality rate of 4 per 1000 live births (2006). Medical consultations are free, but pharmaceutical treatment is free only up to school age. As of 1999, children up to one year of age were vaccinated against diphtheria, pertussis, and tetanus and measles (Encyclopedia of the Nations, 2010).

## 2. Structure of the primary care system

### 2.1 Primary care governance

The Danish health system is governed by a combination of national state, regional and municipal institutions.

All three levels have democratically elected assemblies and there is a tradition of decentralization of management and planning to the regions and municipalities. National-level institutions include the Parliament, the government and various state bureaucratic institutions. The state level is responsible for the overall legal framework for health care, and for coordinating and supervising the regional and municipal delivery of services. Five regions are responsible for delivering both primary and secondary health services. Most hospitals are owned and operated by the regions, and hospital doctors are salaried employees of the regions. Private hospitals and clinics have increased since the beginning of 1990s, but there are still fewer than 500 beds in private hospitals, which means that only 2% of the total hospital beds are private (Department of Health and Prevention, 2008b).

Practising doctors are private, rather than state practitioners, but receive almost all of their income from services paid by the regions (Strandberg-Larsen et al., 2007). The regions organize the emergency duties, which form part of the GPs' work responsibility (Strandberg-Larsen et al., 2007). The GPs' duties (role) are regulated by the Health Law (Sundhedsloven) of 2005.

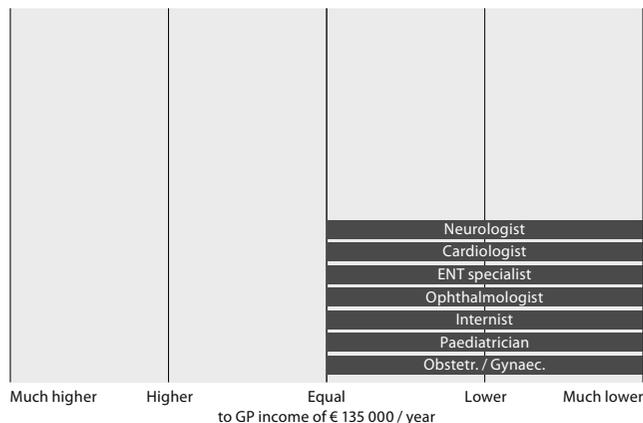
Many doctors working for the National Board of Health are also employed by the Medical Association, and hence are strengthening the link between the Association and the government.

### 2.2 Economic conditions of primary care

All health care in Denmark is free. Most of the municipal and regional health care spending is financed by income taxes. The instrument of control of health care for the central government is the allocation of the budget. The Danish GPs are independent, self-employed doctors with a contract with the health authorities of the regions. The remuneration of GPs in Denmark is a mixture of capitation, which makes up about one-third of the total income, and fee-for-service payments, as well as extra fees for out-of-hours consultations, telephone consultations and home visits. GPs run their own practice and usually own their equipment and facilities, and have to pay their auxiliary staff as well (Strandberg-Larsen et al., 2007). The introduction of the fee-for-service system increased productivity as well as reducing the referral rate to specialized care in Copenhagen (Krasnik et al., 1990). The system is used strategically to promote prioritized activities by increasing the fee for these activities. Health care personnel employed by the municipality (nursing home staff, home nurses, health visitors and municipality dentists) are paid a fixed salary. The GPs' auxiliary staff are paid by the GPs, usually fixed salaries (Strandberg-Larsen et al., 2007).

According to estimates of the Organisation of General Practice (PLO), the average net (after paying office expenditure) income for a GP is in 2010, about DKR 1 million (€135 000), which is much lower compared to medical specialists' income (see Fig. A6.1).

**Fig. A6.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

GPs in Denmark have a relatively high status in the health system. It is quite expensive to buy a practice, therefore there is little turnover in the GPs workforce. The average age of GPs is high: 53.6 years in 2009. In 2009, 82.8% of all GPs were 46 years or older. GPs work on average 44 hours per week (Brøndt, Vedsted & Olesen, 2007).

In 2009, 27% of GPs in Denmark were enrolled in postgraduate training (Department of Health and Prevention, 2008a). According to the National Board of Health's figure from 2006 the ratio of active GPs to active specialists is (4172/6301) 0.66. There is a postgraduate training programme for GPs in three of the four Danish universities. In the undergraduate medical curriculum, general practice is an obligatory and main subject in all universities. There is also professional training for community nurses and for practice nurses.

The College of General Practice in Denmark (DSAM) has 2500 members, which is about 60% of all GPs. The main tasks are professional development, education and scientific activities. The General Practitioners Association, whose main task is promoting income interests and negotiating with the regions the establishment of new practices, has 3715 members, which is equal to 89% of all GPs.

There is one peer-reviewed national journal for general practice in Denmark: *Månedsskrift for Praktisk Lægegerning*.

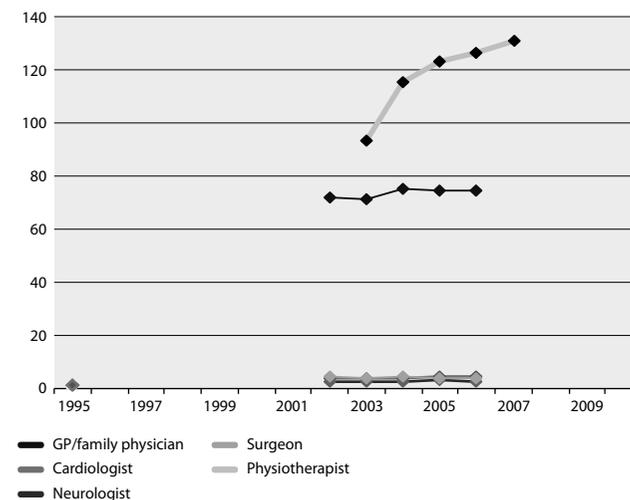
Danish nurses are organized in Dansk Sykepleraad (DS), which defends their financial interests and is

responsible for professional development. There are 11 000 primary care nurses. It is unknown how many of them are members of the DS. There is also a college for primary care nurses (Faglig Selskab for Sykepleiere i Primærsektoren) with 300 members. The journal *Promart focus* (Primary Focus) is mainly for home nurses.

There are 7.9 nurses per 1000 people in Denmark and 3.4 physicians in total per 1000 people, which gives a nurse/physician ratio of 2.3 for all services combined. There were 11 000 hospital-employed doctors in 2003. In the period 2002–2006 there was a small increase in almost all specialties. Fig. A6.2 shows the development in supply of primary care providers over the most recent available five-year period (Eurostat, 2011).

About 3680 doctors work as GPs, which gives one doctor per 1575 inhabitants. In 2004, there were 3.6 doctors and 9.8 nurses per 1000 inhabitants. The recruitment of doctors to rural and remote areas has become more and more difficult (Strandberg-Larsen et al., 2007).

**Fig. A6.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Source: (Eurostat, 2011).

## 3. Primary care process

### 3.1 Access to primary care services

GPs have a limited gatekeeping role, as patients have direct access to ophthalmologists, ENT specialists, cardiologists, neurologists and surgeons, and only need a referral to visit GP practice nurses, specialist nurses, home care nurses, dentists, midwives, occupational therapists

and speech therapists. With a private out-of-pocket payment the patient can go directly to gynaecologists/obstetricians, paediatricians and specialists in internal medicine.

There are very small geographical differences in density of GPs in Denmark. But there are some rural areas where it is difficult to recruit and retain doctors.

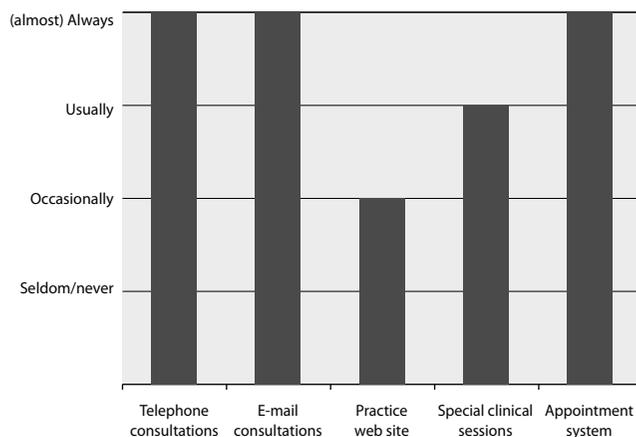
GPs are obliged to keep their offices open eight hours a day, five days a week (Monday to Friday from 8 a.m. to 4 p.m. (Sygesikringens Forhandlingsudvalg and Praktiserende Laegers Organisation, 2006).

Patients do not pay for consultations with GPs, nor do they pay for specialist consultations if they are referred by their GP. Patients do not have to pay for home visits by GPs, but they do have to pay part of the cost of medicine and injections.

According to a survey in 2007, general practice patients report that 82% find it easy to gain access to their GP (European Commission, 2007). Almost all GPs have an appointment system and facilitate telephone and e-mail consultations (see Fig. A6.3).

Primary care cooperatives provide after-hours primary care services. Each cooperative consists of GPs in a region from several groups that provide after-hours primary care services in non-profit large-scale organizations, which include telephone triage and advice, an office for face-to-face contact and house calls.

**Fig. A6.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



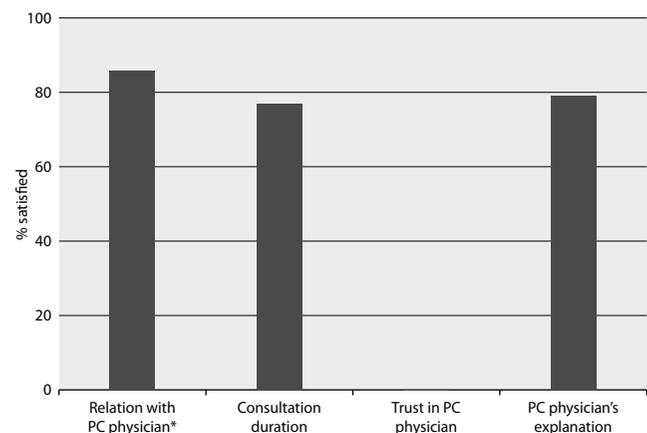
### 3.2 Continuity of primary care services

Primary care in Denmark is based on a patient list system. Almost the total population is on the list of a personal GP. Each GP has on average 1583 patients on their list (Ministry of Interior and Health, 2008).

GPs are obliged to keep a clinical record of all contacts and all GPs have computerized medical records. Most GPs also use computers for appointments, billing, prescriptions, searching for expert information on the Internet, referring patients to specialists and sending prescriptions to pharmacists. All patients in need of a referral must bring a referral letter to the specialist. Specialists and hospitals are obliged to send a discharge letter for all patients who have been referred by GPs.

The patients are free to choose and change which GP they want to register with. About 82% of patients report that they are satisfied with their GP (see Fig. A6.4) (European Commission, 2007).

**Fig. A6.4:** Patient satisfaction with aspects of care provision



\* This is the average of several items, ranging from 94% satisfied with respecting secrecy to 77% satisfied with being included in decision-making (Patients' assessment of their GPs – the significance of physician gender and age).

### 3.3 Coordination of primary care services

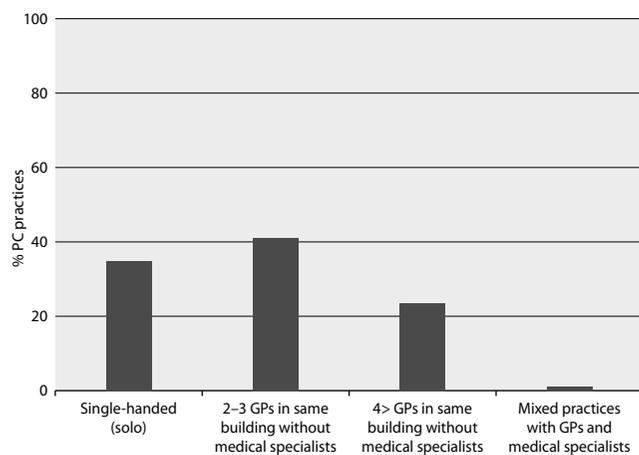
General practice is the public primary gateway to health care, where all common diseases and conditions affecting the population are handled. The gatekeeping function in Denmark is weak, with direct access to various medical specialists (see section 3.1). In 2007, there was a total of 38.5 million contacts with general practice service, which is equivalent to each citizen visiting a general practice on average seven times a year. Every resident in Denmark is entitled to enroll in a medical practice or practices.

As Fig. A6.5 shows, 36% of GPs work in solo practices, whereas the greater majority work in group practices (Organisation of General Practitioners, 2009). GPs employ 3100 auxiliary staff (January 2008). Each doctor has a full operational responsibility for his or her clinic, but is obliged to provide general medical care, under the conditions specified in the Agreement System.

Most of the cooperation between specialists and GPs is based on referral letters and the hospitals/specialists' discharge letter. There is no formal cooperation except phone calls to clarify professional questions. The integration and cooperation of care between specialized and primary care is not structured and institutionalized. Specialists very rarely visit general practices, but are often used as teachers in conferences for GPs.

GPs' clinical data are only incidentally used for public health purposes.

**Fig. A6.5:** Shared practice



#### 3.4 Comprehensiveness of primary care services

Approximately 10% of the patient contacts with a GP lead to a referral to other health services.

Most of the general practices have standard equipment such as an otoscope, urine strips, gynaecological speculum and a peak flow meter. Only occasionally is the following equipment used by Danish GPs: ECG or instruments for stitching wounds.

GPs are always the first contacts for children with a severe cough and hearing problems, women asking for oral contraceptives and for women confirming pregnancies.

Women with irregular menstruation will also always seek help from a GP, while people with suicidal inclinations would usually go to a GP (see Table A6.2).

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

The GPs and the few practising specialists in primary care prescribe 16.03 DDD/1000 inhabitants/day of antimicrobials (2007) (ESAC, 2010). The number of hospital admissions for people with a diagnosis of asthma was 43 per 100 000 inhabitants in 2007 (OECD, 2009).

The general vaccination programmes are carried out by GPs and financed by the regions on a fee-for-service basis. The vaccination coverage of diphtheria, tetanus, pertussis, polio and Hib (haemophilus influenza type b) are relatively high in Denmark. But there are problems with measles, mumps and rubella (MMR) vaccination due to parents' doubts about adverse effects and complications as a result of the vaccine. In 1996, 85% of all children aged 15 months were vaccinated with MMR in Denmark, but in the city of Copenhagen this figure was less than 80%. In 2003, the percentage of children receiving the combined vaccination reached 96% in Denmark as a whole and 95% in the City of Copenhagen (National Serum Institute, 2005).

Denmark incrementally introduced regional screening programmes for detecting breast cancer, targeting women of the 50–69 years age group. They are invited for screening every second year. In 2006 the coverage was 65.9%. Pap smears are taken by GPs in Denmark. A systematic screening programme started in 1968–1969, targeting the 23–59 years age group. The women are invited to have a Pap smear every year. In 2005 the coverage was reported to be 69.4%.

### 4.2 Efficiency of primary care

There are on average 6.8 contacts per patient per year registered on a general practice list (in 2009). Of all the contacts performed by the Danish GPs in 2009, 1.2% were home visits and 38.4% telephone consultations. Each face-to-face consultation lasted for an average of 10–15 minutes (based on personal reports from GPs) (Danish Medicines Agency, 2010).

**Table A6.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 18 asking for oral contraception</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Women aged 35 with lump in her breast</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Peptic ulcer</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Strapping an ankle</li> </ul>	<ul style="list-style-type: none"> <li>• Wedge resection of ingrown toenail</li> <li>• Fundoscopy</li> <li>• Setting up an intravenous infusion</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Testing for sexually transmitted diseases</li> <li>• Screening for HIV/AIDS</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cervical cancer screening</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Breast cancer screening</li> </ul>
Health promotion (from a list of 4 items)	–	–

Note:

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

Danish GPs refer 363 people/1000 listed patients to practising specialists (in 2006) and 270 were referred to hospitals per 1000 listed patients in 2006 (Sundhedsstyrelsen, 2010).

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# 7 Estonia

*K. Põlluste, M. Lember*

## 1. The context of primary care

### Country and population

Estonia is the smallest of the Baltic countries, covering an area of 45 227 km<sup>2</sup>. The population was constantly increasing until 1990, both as a result of immigration and a natural increase. Since 1990, immigration has been decreasing and emigration has been increasing. Likewise, the number of births has been diminishing and the number of deaths has been growing. In January 2010, the population of Estonia was 1.34 million with 46% men and 54% women. The average population density is 29.6/km<sup>2</sup>. The urban population accounts for 65% of the total population. In recent years, an ageing of the population has been observed. The proportion of children (aged 0–14 years) has decreased (from 22.3% in 1990 to 15% in 2009) and the proportion of people aged 65+ has increased (from 11.6% in 1990 to 17.1% in 2009). Since 1991, the natural population increase (birth/mortality ratio) has been negative, but there has been an upward trend since 1994 due to an increasing number of births. In 2009, the birth and death rates per 1000 inhabitants were 11.8 and 12.0 respectively (Statistics Estonia, 2010). Thus, today the main problem regarding Estonia's population is the same as everywhere in Europe – an ageing population.

### Development and economy

Estonia is a parliamentary republic. The Parliament (Riigikogu) consists of one chamber whose 101 members are elected every four years. The country is divided

**Table A7.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Estonia	EU <sup>1</sup>	Estonia	EU <sup>1</sup>	Estonia	EU <sup>1</sup>	Estonia	EU <sup>1</sup>	Estonia	EU
1995	n.a.	7.6	239.7	1275.9	834.9	740.9	319.2	292.7	14.3	27.5 <sup>6</sup>
2000	5.3	7.9	543.6	1608.0	717.6	669.0	309.6	295.1	18.8	28.3 <sup>5</sup>
2005	5.0	8.5	789.4	2150.9	547.8	604.6	320.2	316.0	19.6	26.3 <sup>4</sup>
2009	6.1	8.8	1263	2788.2	571.4	564.8	334.9	321.6	25.6	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Estonia	EU <sup>2</sup>	Estonia	EU <sup>1</sup>	Estonia	EU <sup>1</sup>	Estonia	EU <sup>1</sup>
1995	673.9	575.1	12.7	12.5	17.2	15.7	5–9	6.6
2000	621.9	655.9	9.2	10.3	18.7	17.7	6.7	6.8
2005	657.1	682.7	7.9	9.5	16.4	16.2	6.9	6.8
2009	640.2	745.5	7.8	8.8	15.9	15.6	7.1	6.9

Source: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> These numbers for Estonia refer to year 2008, except the average length of stay, acute care hospital admissions and outpatient contacts which refer to 2009.

into 15 administrative regions (counties) that altogether contain 226 municipalities. Economic reforms geared towards a market economy and rapid changes have taken place in the whole Estonian society since the early 1990s. Besides the economic reforms, there have also been reforms in the social and health sectors. In the period 1995–2007 the GDP per capita increased more than three times (from US\$ 6278 in 1995 to US\$ 20 350 in 2007) (OECD, 2009). Since the mid 1990s the positive changes in the Estonian economy have led to the creation of jobs and increases in wages and pensions, and unemployment and the percentage of people living below the poverty line have decreased. However, in 2008 the Estonian labour market changed remarkably when unemployment almost doubled in only six months (Ministry of Social Affairs, 2009a). In 2009, the unemployment rate was 13.8%.

Considering the Human Development Index, Estonia has over the years improved its position in the world. Between 1990 and 2007 Estonia's Human Development Index rose by 0.46% annually from 0.817 to 0.883, which in 2007 gave the country a rank of 40th out of 182 countries with data (UNDP, 2010).

## Population's health

Like other central and eastern European countries, Estonia experienced a rapid worsening in the indicators of public health in the early 1990s, together with rapid changes in society. Life expectancy started to decrease and reached its lowest level by the year 1994 – 66.5 years (60.5 years for male and 72.8 for females). Since 1995, however, life expectancy has been increasing, reaching 74.1 (68.6 for males and 79.2 for females) in 2008 (Statistics Estonia, 2010). Healthy life expectancy at birth in 2008 was 55.2 years (52.9 for males and 57.3 for females) (WHO, 2010b). The infant mortality rate per 1000 live births has decreased considerably during the last 18 years, from 15.8 in 1992 to 3.6 in 2009 (Statistics Estonia, 2010). Like the number of births the total fertility rate has increased too – from 1.34 in 2001 up to 1.65 in 2008 (Eurostat, 2010; Statistics Estonia, 2010).

Cardiovascular diseases, malignant neoplasms and accidents have been the most common causes of deaths. The mortality rates of the five most common causes of deaths in 2008 were as follows (all ages per 100 000 population): (1) ischaemic heart disease – 342.2; (2) malignant neoplasms – 264.3; (3) cerebrovascular disease – 117.1; (4) hypertensive heart disease – 114.9; and (5) accidents and poisonings – 101.3 (Statistics Estonia, 2010).

The top five disease burden (estimated in age-standardized DALYs [disability-adjusted life-years] for 100 000 population in 2004) are as follows: (1) neuropsychiatric conditions – 3501; (2) cardiovascular diseases – 3045, of those, ischaemic heart disease 1538 and cerebrovascular disease 719; (3) unintentional injuries – 2314; (4) malignant neoplasms – 1638, of those trachea, bronchus, lung cancer 296; and (5) sense organ diseases – 888 (WHO, 2010a).

#### Characteristics of the health care system

The total health expenditure as a percentage of GDP over the years has been about 5–6%, however, the total health expenditures per capita have been increased (see Table A7.1). The Estonian health care system is mainly publicly funded through social health insurance contributions in the form of an earmarked social payroll tax, which amounts to over 60% of total funding, and by general tax revenue (about 10–11%). The earmarked payroll tax is pooled by the Estonian Health Insurance Fund (EHIF), which acts as a single purchaser of care. The Ministry of Social Affairs is responsible for covering the costs of ambulance care and emergency care for uninsured people, and is also the largest contributor to public health programmes. The municipalities have a relatively small role in the financing of health care. Private expenditure comprises approximately a quarter of all health expenditure, mostly in the form of co-payments. Since the implementation of the social health insurance system, the proportion of insured people has been steadily about 94% of the Estonian population. People who are not covered by the health insurance system have to pay for health services themselves, although emergency care for them is guaranteed and paid from the state budget (Koppel et al., 2008). The EHIF is responsible for negotiating contracts with health care providers and paying for health services, but also for reimbursing pharmaceutical expenditures and paying for sick leave and maternity benefits. In 2009, 69% of the annual health insurance budget was spent on health services (including the primary care services), 11% on reimbursing pharmaceutical expenditures, and 20% on sick leave and maternity benefits (EHIF, 2010).

Provision of health services is divided between two levels. Primary care is organized as the first level of contact with the health system and provided by independently contracted GPs who practise on the basis of a patients' list. Secondary care – specialized outpatient and inpatient care – is mainly provided by the hospital and

its outpatient departments. However, some ambulatory specialist care is also provided by health centres and specialists practising independently.

The number of health care personnel, particularly the number of nurses, started to decrease in 1992, but since of the early 2000s the number of physicians and nurses started slowly to increase to 335.3 and 685.9 per 100 000 inhabitants respectively in 2008. The number of GPs increased in the period 1998–2008 from 22 to 62.1 per 100 000 inhabitants; this sharp increase is due to large-scale retraining of the previous district internists and paediatricians as family doctors. The average number of outpatient visits per person dropped from 7.1 in 1990 to 4.8 in 1992 then slowly increased to 6.5 visits per person in 2008. In 1992, there were 118 hospitals in Estonia and in 2008 the number of hospitals had decreased to 57. The number of hospital beds also decreased from 968.2 per 100 000 inhabitants in 1992 to 571.6/100 000 in 2008. The number of acute hospital admissions per 100 persons has been stable at about 17 and the average length of stay in the hospitals dropped from 17.4 days in 1990 to 7.9 days in 2008 (National Institute for Health Development, 2010).

Total pharmaceutical expenditure as a proportion of total health expenditure has increased from 17% in 1997 to 24.8% in 2007. In 2009, the total number of pharmaceutical prescriptions reimbursed by the EHIF was 6.44 million, or five prescriptions for each insured person. In 2008, the number of prescriptions was 6.64 million, of which 63.7% were prescribed by GPs (EHIF, 2010).

## 2. Structure of the primary care system

### 2.1 Primary care governance

The reorganization of the primary care system started in the early 1990s. The goals of the primary care reform and the basic tasks of the reform were formulated in 1997 as follows: (1) to create a list system so that the population could register with a primary care doctor; (2) to introduce a partial gatekeeping system; (3) to introduce a combined payment system for GPs; and (4) to give the GPs the status of independent contractors (Lember, 2002). By the early 2000s, when these tasks were completed, the Ministry of Social Affairs initiated and completed, together with representatives of stakeholders and academic organizations, the new Primary Care

Development Plan, which was approved by the government in 2009 (Ministry of Social Affairs, 2009b). The core of this Plan is the understanding that primary care is the first contact with the health care system for all people, and most of the services needed will be provided in primary care, including health promotion and disease prevention. If necessary the patient will be referred to specialist care (including nursing care). The primary care doctor is responsible for provision of necessary health services to his/her patients and for the continuity of care. According to the vision of the Development Plan, in the year 2015 the most frequently required primary care services provided by the primary care team and other specialists of the primary care network will be accessible for all people near their home or workplace.

The geographical distribution of practices per county is planned according to population numbers. In rural areas local conditions (e.g. traditional location of a practice, transport options for the population) are taken into consideration. The Plan is approved by the Ministry of Social Affairs and the EHIF contracts only the approved practices.

The inspection of provision of health services (including primary care services) is coordinated by the Health Board. The requirements for health personnel, rooms and equipment are stated by law. To practise in primary care physicians should have completed postgraduate specialization in the field of family medicine and, like all medical staff (physicians, nurses, midwives), they have to be registered with the national Health Board. A voluntary certification system for GPs has been introduced as well. The requirements for facilities and equipment for primary care practices are approved by the Minister of Social Affairs (Ministry of Social Affairs, 2001). There are requirements for rooms (list of required rooms, required area of rooms, requirements for physical environment, etc.) and for equipment (list of required medical and other equipment). A voluntary peer-review mechanism for primary care practices has been introduced by the Estonian Association of Family Doctors. There are also a number of clinical guidelines for GPs and nurses. The clinical guidelines are produced by GPs and family nurses, as well as by other medical specialists, and financed by the EHIF.

Community influence at a national level is expressed by annual health care (including primary care) satisfaction surveys. Community influence can also be seen incidentally at local level as municipalities may act as

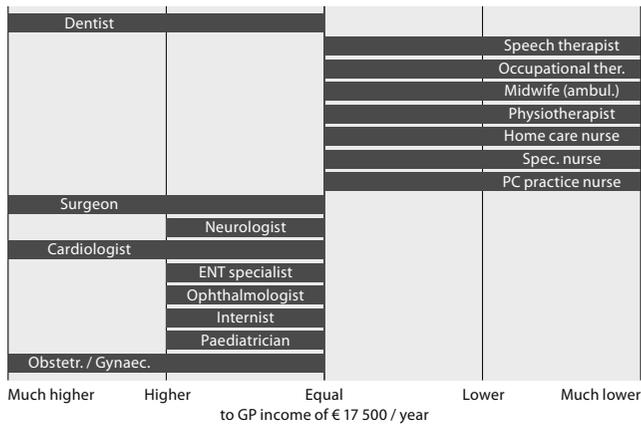
owners of primary care facilities. Some municipalities also endow primary care practices. Patients' rights are mainly covered by the Law of Obligations Act (2001): informed consent, patient access to own medical files, confidential use of medical records, and availability of a procedure to process patient complaints. All this is non-specific for primary care, since the same applies to specialist care as well.

## 2.2 Economic conditions of primary care

In 2006, expenditure on outpatient care (including primary care and specialized outpatient care) was 22.6% of total expenditure on health (Eurostat, 2010). Of the EHIF's total budget for health services, the budget for primary care is about 13%. As of January 2009, altogether 1.28 million insured persons, or 95.6% of all Estonian residents (1.34 million) were registered by the EHIF. All insured persons are fully covered for primary care costs (except the costs of medicines prescribed by GPs; there is a contribution by patients, depending on the diagnosis).

The legal status of the GP was defined by law in 2002 (Health Insurance Act, 2002). According to this law, all GPs are independently contracted practitioners. Most GPs are independent contractors with the EHIF and are paid via a combination of different remuneration types (EHIF, 2010). About 5% of GPs are salaried by other physicians and are paid flat salary. The average structure of the budget of a GP's practice is made up as follows: (1) basic allowance to cover accommodation and transportation costs – 11%; (2) capitation payment – 66.5%; (3) fund for examinations and lab tests – 20.3%; (4) payment on performance indicators (quality bonus) – 1.7%; and (5) payments to compensate GPs working more than 20 km from the nearest hospital – 0.5% (about 24% of general practices). The capitation payment depends on the age structure of the patients on the list. In 2010 the capitation payment for one person per month is determined as follows: for children 0–2 years – €6.85; people aged 2–70 years – €2.85; and people aged more than 70 years – €3.45 (EHIF, 2010). In 2008, the average gross annual income of GPs was €86 790, which includes the costs of running the practice (e.g. costs for premises, equipment, care, employed staff, etc.). Compared to other specialists the GP's income (around €17 500 per year in 2009) tends to be lower, but much higher than that of nursing staff, midwives, physiotherapists and other therapists (National Institute for Health Development, 2010) (see Fig. A7.1).

**Fig. A7.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



2.3 Primary care workforce development

The tasks and duties of GPs are described in the Development Plan of Primary Health Care and legally fixed by the regulations approved by the Minister of Social Affairs. GPs provide comprehensive care irrespective of patients' age, gender and health problems. The average number of working hours per week of GPs is 40 hours, including at least 20 hours for direct contact with patients at the office.

GPs in Estonia are trained at the University of Tartu which is the only university in Estonia with a medical faculty. It has a postgraduate programme in family medicine with a duration of three years (out of this, 18 months is in primary care) and family medicine is also a subject in the undergraduate medical curriculum (Maaroos, 2004). At the beginning of the 1990s the training of GPs was conducted in two ways: three-year in-service retraining courses for existing primary care physicians (paediatricians and physicians of internal medicine), or three-year full-time residence courses for physicians who have graduated from the medical faculty and completed their internship. The first training programme for doctors for family medicine was initiated in 1991 and the first specialist diplomas were awarded in 1993 (Lember, 1996). In 2009, 11 graduates out of 85 (12.9%) started postgraduate training in family medicine.

The primary care workforce capacity needs and development in the future is forecast in the development plans of medical and nursing specialities as well as in Development Plan of Primary Health Care (Ministry of Social Affairs, 2009b). In the period 2004–2008 the supply of directly accessible medical and nursing disciplines (GPs, gynaecologists, ophthalmologists,

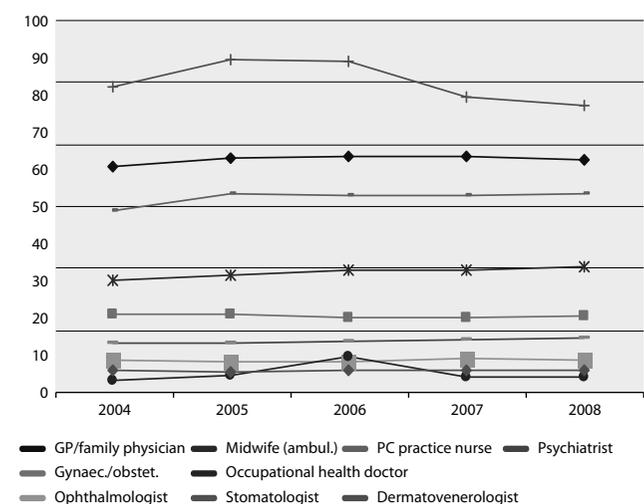
stomatologists, dermatologists, specialists in sexually transmitted diseases, psychiatrists, practice nurses and midwives), as well as some specialists has not changed remarkably (see Fig. A7.2) (National Institute for Health Development, 2010). At the beginning of 2010, in all 998 GPs were registered by the Health Board. The average age of all registered GPs is 51.4 years, 37% of GPs are aged 45–54 and 39% are 55 years or more (Health Board, 2011).

There is also a one-year specialist training, after a three-year nurse training, for practice nurses, which is provided by Tallinn Health Care Colleges.

The Estonian Society of Family Doctors has about 900 members and its activity is wide-ranging, defending the financial/material interests of GPs, dealing with professional development (including guideline development) and education, and participating in scientific activities (e.g. organizing annual conferences). The professional journal *Perearst (Family Doctor)* is published four times per year and its content is as follows: news 10%, opinions 10%, popular articles 20%, overview articles 30%, research reports 30%. The journal is not peer reviewed and has no abstracts in English.

A Fellowship of Family Nurses is an organization acting within the Estonian Nurses Association and deals with the same activities as the Estonian Society of Family Doctors: defending the financial and material interests of its members, professional development and education, as well as scientific activities. The Fellowship of Family Nurses has 166 members.

**Fig. A7.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



### 3. Primary care process

#### 3.1 Access to primary care services

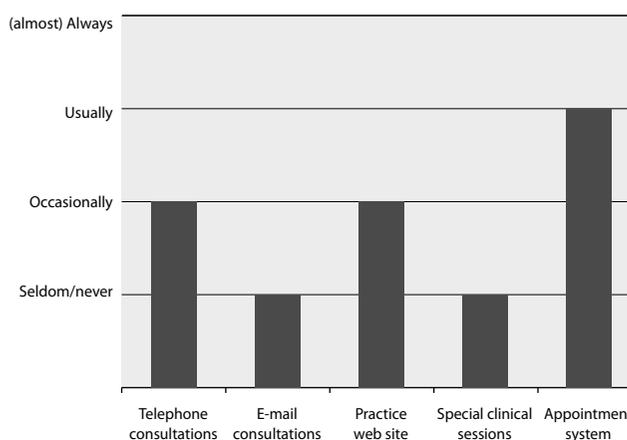
Between 1991 and 2004 a total of 979 doctors became re-qualified as GPs and joined the ranks of GPs to meet the needs of the Estonian population: one GP per 1600±400 inhabitants (Maaros & Meiesaar, 2004). The size of the patient lists has stabilized, but it can still vary between different counties and between the countryside and the towns because of variations in the density of the population in different areas. In 2008 the average number of GPs was 62.1 per 100 000 inhabitants. The density of GPs varies between the regions. The highest density is 77 and the lowest less than 43 per 100 000 inhabitants, however, the urban and rural densities do not differ substantially – in 2009 the average urban density was 61 and rural density 58 per 100 000 inhabitants. Nevertheless, there is still a shortage of GPs in some peripheral areas (Ministry of Social Affairs, 2009b).

All general practices and primary care centres are obliged to have at least eight opening hours per working day (Monday to Friday). The number of home visits is rather small – on average 2.2 visits per week per GP (National Institute for Health Development, 2010). Out-of-hours service is not stipulated in the general practice contract and it is provided by the medical emergency service or by ambulance service if the patient has emergency health problems outside GPs' office hours. The number of telephone consultations is increasing year by year and some practices have web sites, but e-mail consultations are not yet common (see Fig. A7.3).

Patients do not have to pay for visits to their GP, but there is a fee for GPs' home visits (EEK 50 or €3.2 per visit, except for children up to 2 years and pregnant women from the twelfth week of pregnancy). Patients also pay a fee for each visit to a specialist (EEK 50 or €3.2 per visit, except for children up to 2 years and pregnant women from the twelfth week of pregnancy). There is also co-payment for the costs of medicines prescribed by GPs or by specialists (Health Insurance Act, 2002).

In 2007, 6% of patients rated general practice care as not affordable, but 89% found it is easy to reach and gain access to GPs (European Commission, 2007).

**Fig. A7.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



#### 3.2 Continuity of primary care services

All GPs have a patient list system with an average population size of 1600 ± 400 (Ministry of Social Affairs, 2009b). Over the years, about 70% of patients are reported to visit their GP if they had some health problems (Polluste, Kalda & Lember, 2004, 2007, 2009). To guarantee continuity of care, all GPs routinely keep the records for all patient contacts. All GPs use computers to keep patients' records, but also to prescribe medication and to write financial and administrative documents. Clinical record systems are able to generate lists of patients by diagnoses, but not always by health risks. When GPs refer their patients to a medical specialist they always use a referral letter, which usually includes relevant information on diagnostics and treatment performed, and the specialists usually communicate back to the referring GP after an episode of treatment. Mostly, GPs receive information within 24 hours about contacts that patients have with out-of-hours services.

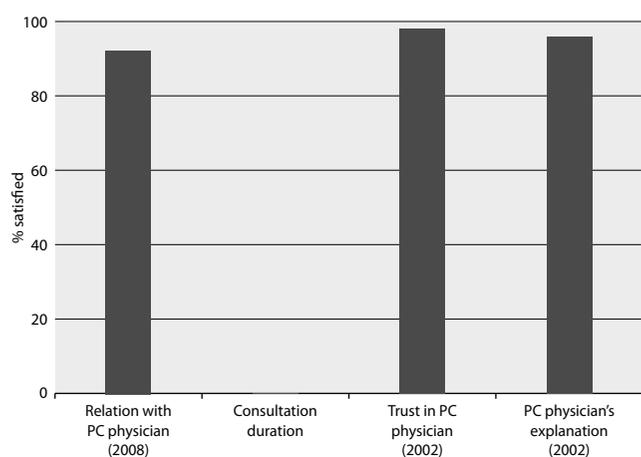
Patients are free to choose the GP they want to register with, but this choice is certainly limited in rural areas where the population density is low and there is only one GP for the region. However, satisfaction with GPs is high, as more than 90% of the patients are satisfied with their GP and explanations given by GPs, and patients also reported to trust their GPs (see Fig. A7.4) (Polluste, Kalda & Lember, 2004, 2007, 2009). Satisfaction with the time available during consultations with GPs has not been studied.

**Table A7.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	–	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	• Fundoscopy
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Allergy vaccinations</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> </ul>	–
Health promotion (from a list of 4 items)	–	–

Note:

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

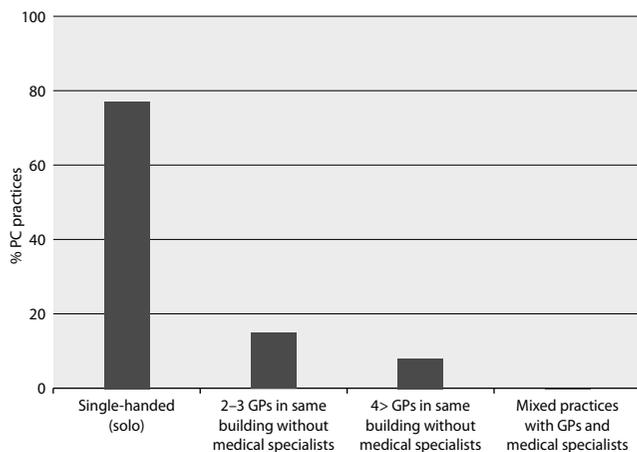
**Fig. A7.4:** Patient satisfaction with aspects of care provision

### 3.3 Coordination of primary care services

There is a partial gatekeeping system in Estonia (Ministry of Social Affairs, 2009b). In general, people need a referral from a GP to see a specialist, otherwise the EHIF will not pay for the specialist's services and the patients have to pay themselves. Still, referral is not required if the patient needs specialized medical care in connection with a trauma, tuberculosis, eye disease, skin disorders or sexually transmitted disease, or in cases where gynaecological or psychiatric care is provided. Direct access to all specialists is possible if the costs of the visit are paid privately (Lember, 2002).

Most general practices (77%) are single-handed (solo practices), although in 15% of cases two or three GPs work together and in 8% of cases four or more GPs work in the same building without medical specialists (EHIF, 2010). In Estonia there are no mixed practices with GPs and medical specialists (see Fig. A7.5). Also, cooperation with medical specialists is not very close (such as joint consultations or substituted specialist care), but it is common that medical specialists give clinical lessons for GPs. The closest cooperation in primary care is with other GPs as well as with practice nurses. There is also cooperation between GPs, home nurses and social workers. Nurse-led activities such as health education or diabetes care are rather uncommon in primary care (Ministry of Social Affairs, 2009b).

Clinical patient records from GPs are used routinely as health statistics at national and regional level to identify health needs and priorities for health policy, while nationwide health surveys are conducted annually to improve the quality and responsiveness of primary care (Polluste, Kalda & Lember, 2004, 2007, 2009).

**Fig. A7.5:** Shared practice

### 3.4 Comprehensiveness of primary care services

The minimum set of medical equipment of general practices is specified in the regulation no. 116 of the Minister of Social Affairs. At present, the following equipment is almost always available in GPs' practices: infant scales, glucose tests, dressings/bandages, otoscope, ECG, urine strips. Also, instruments for stitching wounds, gynaecological speculum and peak flow meter are usually available (Ministry of Social Affairs, 2001).

The work of the GPs has now become quite comprehensive (see Table A7.2). In 2008, 91.5% of total patient contacts were handled solely by GPs without referrals to other providers (EHIF, 2010). Patients visit their GPs with a range of physical health problems (e.g. lung diseases, heart diseases, diabetes type 2, rheumatoid arthritis, etc.), mental health and psychosocial problems, together with children's health problems. That is why the workload of GPs has also increased (Maarros & Meiesaar, 2004). In addition, patients with mental health problems also can visit a psychiatrist and women with gynaecological problems or who are pregnant prefer to see the gynaecologist or midwife for continuity. But the routine paediatric surveillance to children up to 4 years is almost always performed by GPs, including infant vaccination. Also, immunization for tetanus, influenza vaccination and allergy vaccination, as well as cholesterol checking, are almost always performed by GPs. Procedures such as insertion of IUDs, removal of rusty spot from the cornea, joint injection, strapping an ankle or fundoscopy are only occasionally performed by GPs. Furthermore, screening for breast or cervical cancer, or testing for sexually transmitted disease is not a very common activity in general practices (Lember, Kosunen & Boerma, 1998). Individual counselling in the case of

different health risks is occasionally provided by GPs, while groupwise health education is an incidental task. For example, counselling in case of smoking cessation could be provided by a doctor or nurse who has special training and is working in an office for counselling on smoking cessation. These specialists usually work in hospitals. Also, groupwise health education is mostly provided by health promotion specialists (Lember, Kosunen & Boerma, 1998).

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

The average number of prescriptions annually provided by GPs in 2008 was 1050 per 1000 contacts (4.23 million prescriptions per 4.44 million contacts) and 3300 per 1000 registered patients (4.23 prescriptions per 1.28 registered patients) (EHIF, 2010). At present, there is no data available about the defined daily doses of antibiotics use in ambulatory care per 1000 inhabitants per day.

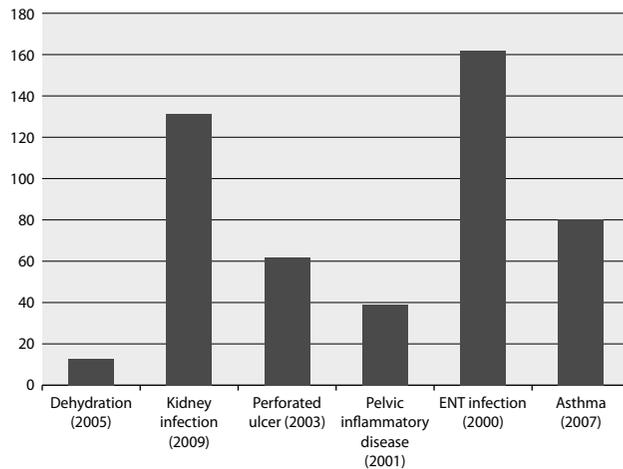
Quality of diagnosis and treatment in primary care is expressed in Fig. A7.6 by the number of hospital admissions for people per 100 000 population in 2008 (EHIF, 2010).

At present, there is a shortage of data about the quality of diabetes care, COPD and asthma care. The number of hospital admissions for people with a diagnosis of asthma per 100 000 population in 2008 was 79.5 (EHIF, 2010).

The percentage of infants (1-year-old children) vaccinated within primary care against various infections in 2008 was as follows: (1) diptheria – 95%; (2) tetanus – 95%; (3) pertussis – 95.1; (4) measles – 89.8%; (5) hepatitis B – 94.1%; (6) mumps – 89.8%; and (7) rubella – 89.8%. In 2008, the percentage of population aged 65+ vaccinated against flu was 1.16% (Health Board, 2011).

Breast cancer and cervical cancer screening is not part of primary care since there are national screening programmes that target women aged 50–59 years every two years concerning breast cancer and every five years for women aged 30–59 years concerning cervical cancer screening. The coverage of breast cancer screening was 37% in 2004 and 12.7% for cervical cancer screening in 2006 (Estonian National Institute for Health Development, 2007; Von Karsa et al., 2007).

**Fig. A7.6:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



#### 4.2 Efficiency of primary care

In 2008 the number of general practice consultations per capita per year was 3.2 and the proportion of home visits of all general practice–patient contacts was 2.24% in 2008 (EHIF, 2010; National Institute for Health Development, 2010). The average consultation time is  $9.0 \pm 4.9$  minutes (Tähepold et al., 2003). The number of new referrals from GPs to medical specialists per 1000 listed patients per year was 328.55 in 2008 (421 115 referrals per 1.28 million listed patients) (EHIF, 2010). At present, there are no data about the proportion of telephone consultations of all general practice–patient contacts.

#### Conclusion

The primary care strategy has been implemented and the objectives set in 1997 have been achieved. The prerequisite for the reforms have been changes in the education of doctors: creating family medicine as a discipline and specialization on its own, introducing specific residency training and undertaking large-scale retraining of primary care physicians in the period 1991–2004. The patient list system and partial gatekeeping have been implemented, GPs are independently working specialists and a stable payment system has been established. The work of GPs has become quite comprehensive, with GPs having fully taken over the monitoring of children's health; they also deal with most people with chronic conditions. Access to primary care services is good and most of the population is satisfied with the general practice service. Thus, the new system based on GPs has been successfully implemented

and the next step in the primary care development should focus on the extension of the range of services provided by other specialists (midwives, physiotherapists, social workers) who should be added to primary care teams.

#### Acknowledgements

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# 8 Finland

*K. Winell, T. Deden*

## 1. The context of primary care

### Country and population

Finland is a Nordic country bordered by Sweden, Norway and Russia. Its area is 338 424 km<sup>2</sup> and it is the most sparsely populated country of the EU, with a mean density of 16 inhabitants/km<sup>2</sup>. Finland has 5.4 million inhabitants across its 336 municipalities, with an annual growth rate of 0.5%. Of the total population 52.5% are females and 47.5% males. In 2009, 16.7% of the population was aged 0–14 years, 66.4% was aged 15–64 years, and 16.9% was aged 65 or older (OECD, 2010).

### Development and economy

Finland is a republic. It has presidential periods for six years and the Parliament sits in four-year periods. Finland has been one of the fastest growing nations in Europe economically for the last 10 years. The economic recession from 2008 has however brought down current expectations to very low levels for the coming years. The GDP was €37 181 per inhabitant in 2008 (WHO Regional Office for Europe, 2010). The unemployment rate was 9.5 % in January 2010.

Of the working-age population, 59% have an upper secondary level of education. Finland ranked 16th on the Human Development Index in 2010 with 0.871 (UNDP, 2009).

**Table A8.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Finland	EU <sup>1</sup>	Finland	EU <sup>1</sup>	Finland	EU <sup>1</sup>	Finland	EU <sup>1</sup>	Finland	EU
1995	7.9	7.6	1479	1275.9	812.2	740.9	219.1	292.7	n.a.	27.5 <sup>6</sup>
2000	7.2	7.9	1855	1608.0	754.1	669.0	249.9	295.1	n.a.	28.3 <sup>5</sup>
2005	8.4	8.5	2590	2150.9	705.2	604.6	263.4	316.0	38.2	26.3 <sup>4</sup>
2009	8.4 <sup>7</sup>	8.8	3008 <sup>7</sup>	2788.2	652.3 <sup>7</sup>	564.8	272.1 <sup>7</sup>	321.6	37.7 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Finland	EU <sup>2</sup>	Finland	EU <sup>1</sup>	Finland	EU <sup>1</sup>	Finland	EU <sup>1</sup>
1995	n.a.	575.1	12.1	12.5	19.9	15.7	4.1	6.6
2000	n.a.	655.9	10.3	10.3	20.3	17.7	4.3	6.8
2005	1522.7	682.7	9.9	9.5	20.1	16.2	4.3	6.8
2009	1547.2 <sup>8</sup>	745.5	9.7	8.8	18.6	15.6	4.2	6.9

Source: EU and Finland average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008. <sup>8</sup> Year 2007.

## Population's health

The total life expectancy at birth in 2008 was 76.5 years for males and 83.8 years for females (OECD, 2010). The healthy life expectancy at birth was 51.7 years for men and 52.4 years for women in 2005 (Eurostat, 2010). About 60 000 babies are born every year, with an infant death rate of 2.6 per 1000 live births in 2008 (OECD, 2010).

The top five causes of death among those who are of working age are alcohol-related causes, coronary heart disease, accidents, suicides and pulmonary causes. The top five causes of death among those over 65 years of age are coronary heart disease, dementia, strokes, pulmonary causes. Overall, the top five causes of disease burden are joint diseases, mental diseases, diabetes, coronary diseases and hypertension (Statistics Finland, 2009).

## Characteristics of the health care system

The health care system is financed by taxes and organized by municipalities. Primary care operates in health centres which are currently mainly administered in units that cover a population of at least 20 000 inhabitants. Part of primary care is also offered in occupational health units. Specialist care is administered in hospital districts, of which there are 21 in total. Tertiary health care services are offered in the five university hospitals.

Twenty-two percent of physicians work in health centres, 47% in hospitals, 2% in other public medical centres, 6% in occupational health and 11% private practice (2007) (Finnish Medical Association, 2010).

Table A8.1 shows that in 2008 Finland spent 8.4% of the GDP on health care. Although this is near the EU average level, the expenditure per capita on health care is above the EU average. The number of hospital beds rapidly decreased in the past decade, as did the average length of stay in hospitals and, less so, the number of acute hospital admissions. Compared to the EU average, Finland has a relatively high supply of GPs and nurses, but less physicians in total. There were 2.7 practising physicians in Finland when the European average was 3.0 per 1000 inhabitants in 2008. The number of outpatient contacts per person is remarkably low.

## 2. Structure of the primary care system

### 2.1 Primary care governance

Several government programmes have reshaped health care during recent years. For example, in primary care health centres have been reformed to create larger units. The intensity of changes has resulted in a shortage of GPs in many areas of the country. The Ministry of Social Affairs and Health has for this reason started

programmes to support development in primary care. A new action plan, “An Effective Health Centre”, was launched in September 2008 for the years 2009–2010. The focus is primarily on improving health care services for chronic diseases (Ministry of Social Affairs and Health, 2010).

Primary care is provided by health centres and occupational health units. A health centre consists of different groups of medical professionals (e.g. GPs, home care nurses, physiotherapists, occupational therapists and speech therapists) all working in the same administrative unit. It has been stipulated by law that the municipalities have to organize access to the health centres during working hours. The need for medical help has to be assessed within three days and the care given within an appropriate time, within three months at the latest. Currently, variation in services is huge because of shortages in general practice manpower in some parts of the country. The cooperation of primary care with other levels of health care (including social and mental health care) is stipulated by law.

The national planning of primary care services does not have a separate unit in the Ministry of Social Affairs and Health, but instead there is a common planning unit for all health care services. The government can regulate services through laws and statutes. Since the early 2000s there has been a lot of governmental development funding available. The Ministry moves towards its goals using specific project money. However, municipalities are responsible for organizing health care and the government has limited possibilities to influence the services. Municipalities vary in size from only a few hundred to more than half a million in terms of population, so their power to cover the problems of variation in demand, differ a lot. The government has forced small municipalities to organize primary care services in administrative units that cover a population of at least 20 000 inhabitants.

Physicians can work in primary care if they are qualified, and have completed a vocational training. However, the Ministry allows exceptions to this due to the shortage of primary care physicians.

In addition there is no specific infrastructure for quality management in primary care. Duodecim, the scientific association of physicians, is responsible for guideline development, but there are no guidelines specific to primary care. The National Institute of Health and

Welfare (THL) organizes support for the rational use of medicines in primary care. However, health centres voluntarily organize systematic quality development in the Finnish Quality Networks. This voluntary movement covers more than half of the Finnish population.

The patient law regulates the rights of patients in health care. Patients can see their medical records, they can influence decisions on treatment and they can refuse treatment. Patient complaints are handled primarily at the point of care, but cases can be moved to higher levels.

## 2.2 Economic conditions of primary care

There are no official statistics available for the total expenditure on primary care. According to the OECD, 29.5% of total expenditure on health is spent on outpatient care (including hospital outpatient care), and 5.4% on prevention and public health (in 2008).

Every citizen is covered for health care. Co-payments in primary care are minimal. Patients have a co-payment of up to €50 per year on general practice visits. Costs for medicines prescribed in primary care are covered for 0–60%, depending on the diagnosis and type of medicine, but medicines for severe chronic diseases are covered for most part. There is also an annual maximum of €675.39 for out-of-pocket medical payments.

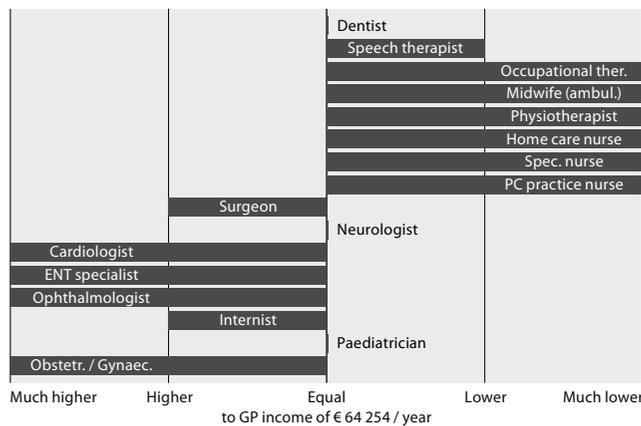
In total, about 24% of the total health care costs are paid by patients. A survey from 2007 among the general population showed that 17% of the respondents rated general practice care as not very or not at all affordable (European Commission, 2007).

Most GPs are employed by municipalities and salaried. The exact remuneration method can vary by municipality. The remuneration can be based on a mix of services provided and the population size or monthly salary. The salary is rarely related to indicators of performance.

Physicians working in occupational health centres are paid for by the national health insurance (50%) and by employers (50%). Besides, there are also private physicians (including specialists in general practice and in other fields) who deliver primary care services, for which patients pay out of pocket, and receive a remuneration from the national insurance company for about 30% of the costs.

The average annual income on salaried GPs is €64 254 (in 2007) (OECD, 2010). Specialist incomes (such as gynaecologists, ophthalmologists and cardiologists) are generally much higher than this. GPs tend to have a similar level of income to specialists who do not work much out of hours or do not work in private practice in addition to their normal hospital work (such as paediatricians, internists and neurologists). Nurses have a lower level of income compared to GPs (see Fig. A8.1).

**Fig. A8.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

Normally when patients visit a health centre they first see a GP, but many health centres are moving to a model where visiting patients are first seen by nurses and, according to the protocols or patients' needs, they consult GPs. The main reason for this task substitution development is the workload of GPs and shortages of GPs (see Fig. A8.2). Shortages are partly the result of young physicians who want to cut down the number of working hours and partly the result of the reorganization of out-of-hours work in specialist care, which has resulted in an increasing need to employ young doctors.

The health centre workforce includes several disciplines – GPs, dentists, nurses, physiotherapists, psychologists, speech therapists. Patients can increasingly contact paramedical personnel directly. However, it is still the case that home care nurses, physiotherapists, occupational and speech therapists mostly work by referral from general practice.

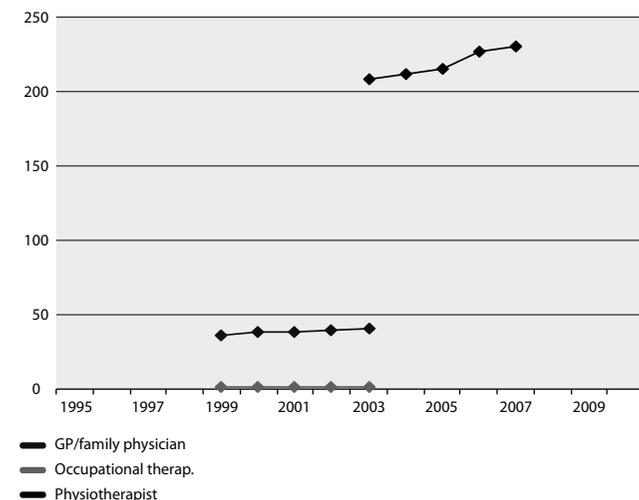
At the moment, the average age of GPs is 45 years. In many health centres the management (in collaboration

with the municipality) is responsible for employing a sufficient number of GPs and nurses. This has led to the reorganization of work in many places.

Postgraduate training in general practice started in 1961 and it became a specialty in 1970. It is a six-year curriculum and 2806 graduates had completed the training by the end of 2010. However, only about half of the trained GPs end up working in health centres (others are often employed in occupational health care, rehabilitation or administrative work) and many places are forced to employ young physicians who have not even completed their basic studies (Finnish Medical Association, 2010).

The great majority of all physicians are members of the Medical Association (about 95%). About two-thirds of physicians working in health centres are members of the general practice association and about one-third are members of the scientific body of GPs.

**Fig. A8.2:** The development in supply of (selection of) primary care professionals per 100 000 inhabitants in the most recent available five-year period



Source: Eurostat, 2010.

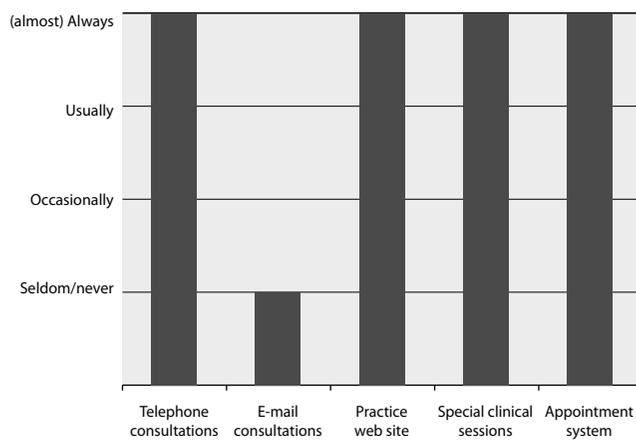
## 3. Primary care process

### 3.1 Access to primary care services

The shortage of GPs nationwide has varied from 5% to 10% during recent years. Local differences can be great, varying from 46 to 65 GPs per 100 000 population. Urban–rural difference is only one of the explanations (Finnish Medical Association, 2010).

The Eurobarometer survey from 2007 showed that almost all respondents (92%) find it easy to reach and gain access to GPs (European Commission, 2007). Opening hours of health centres are normally from 8 a.m. to 3 or 4 p.m., and are not determined by law. Health centres in cities, however, are usually open until 8 p.m. They almost always use an appointment system for the majority of patient contacts, offer special clinical sessions, and telephone consultations, and have a practice website (see Fig. A8.3). Health centres however rarely offer e-mail consultations (Dobrev et al., 2008).

**Fig. A8.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



GPs work on average 39.7 hours a week. An average consultation has a duration of 20 minutes. Home visits are rarely made by GPs.

After normal working hours patients can visit out-of-hours units that are more and more organized in conjunction with hospitals. It often occurs that one of the GPs of a health centre provides services from 4 p.m. to 10 p.m. in their own health centre. Some of these services are also outsourced (and provided by specialty trained staff). They also follow triage to evaluate the need for acute care and patients are referred back to their normal practices the following day.

### 3.2 Continuity of primary care services

Patients are assigned to a health centre in their area, but they are often free to register with any GP in that centre. A new emerging change is that patients are allowed to choose any of the consultation units in their health centre they want (Ministry of Social Affairs and Health, 2011).

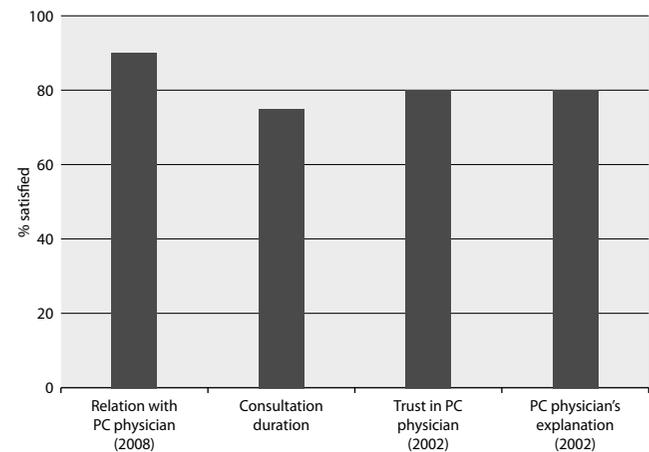
Occupational health services, which often also cover primary care, are offered to the great majority of working population in the community where they work.

More than half of the population have a personal GP. The other half do not always meet the same GP upon their visit. Because of the shortages in manpower many health centres do not use a list system and patients can access any of the physicians in the health centre.

The average population size per GP is 1900. However, this can vary a lot across the country.

The patient satisfaction with GPs leaves room for improvement, as shown in Fig. A8.4.

**Fig. A8.4:** Patient satisfaction with aspects of care provision



To guarantee continuity of care, all GPs have to routinely keep records for all patient contacts by law. All health centres have computerized systems. GPs use their computer for various purposes, including booking appointments with patients, financial administration, prescription of medicines, keeping medical records of patients, searching for expert information on the Internet, and communicating patient information to specialists (Dobrev et al., 2008). Their clinical records are able to generate lists of patients by diagnosis, but rarely by health risk.

GPs commonly use a referral letter when they refer a patient to a medical specialist. Variation exists across the country in the extent to which specialists communicate with GPs after an episode of treatment, or after performing after-hours services. On average, it is common practice for specialists to communicate the necessary information to a GP concerning their patients.

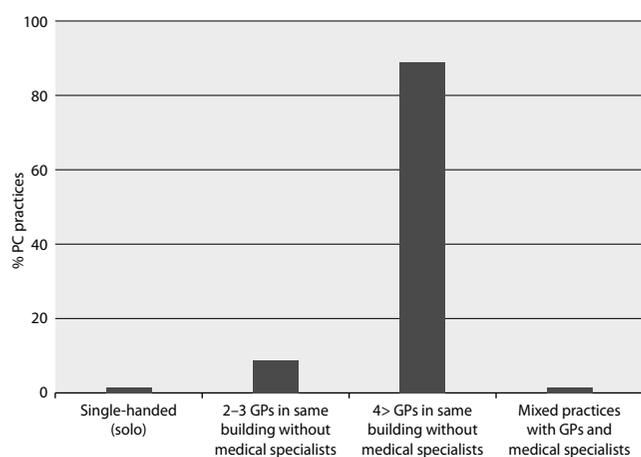
### 3.3 Coordination of primary care services

Patients need a referral to consult specialist care, except in acute cases. In 2008, there were on average 1.6 visits per inhabitant to a GP per year, 3.2 visits to other personnel in health centres and 1.4 visits to medical specialists.

GPs also give referrals within the health centre to nurses, occupational therapists and physiotherapists. Patients can also increasingly visit these professional groups directly.

Patients can visit medical specialists directly in private practices if the costs of the visit are paid privately (see section 2.2). In these private centres many specialties are accessible, along with general practice services. In health centres there are only seldom specialists available (see Fig. A8.5). Health centres are growing in size and solo or even small practices only exist in rural areas and these too are disappearing.

**Fig. A8.5:** Shared practice



*Note: This refers to the public sector. In the private sector, GPs and medical specialists work mostly in large centres with many physicians (mixed practices).*

GPs often have face-to-face meetings with other GPs and practice nurses, they usually also have meetings with nurse practitioners, but only occasionally with home care nurses, physiotherapists, social workers and community mental health workers. They rarely collaborate with midwives.

Nurses are frequently the point of first contact in health centres, and usually provide nurse-led health education. Specific clinics, such as nurse-led diabetes clinics are rarely performed in primary care.

Although it is uncommon for medical specialists to visit a health centre to provide replaced specialist care, or joint care with a GP, this is slowly increasing. The Ministry

emphasizes this kind of development. Specialists do provide clinical lessons for GPs. GPs rarely ask (telephone) advice from medical specialists, due to a lack of time.

Public health information is not often collected from patient records. Some health centres do perform this, but they are a minority.

### 3.4 Comprehensiveness of primary care services

Health centres in Finland are generally well equipped. People often visit the health centre first with their medical problems. In rural areas this is the rule, but in cities, where many private services are available direct contact with specialists also takes place. Those that have well-functioning occupational health care can contact these services first. As a result, for most health problems patients will usually or occasionally visit a GP for first contact (see Table A8.2).

Many women make direct contact with private gynaecologists. Only acute cases with ophthalmological problems contact GPs. In most cases people have direct contact with a private ophthalmologist. A number of families have private insurance for their children and they can contact private paediatricians directly.

Most chronic conditions are taken care of by GPs. Exceptions are certain conditions that need new and expensive medication like acute rheumatoid arthritis and multiple sclerosis.

Minor medical technical procedures are performed by most GPs.

Much preventive work, such as Pap-smears and vaccinations, are performed by nurses in health centres. GPs have their specific tasks in child and maternity care, according to protocols, which make preventive service a continuous chain of services provided by GPs and nurses.

GPs are usually active in health promotion as part of their practice. It is estimated that one-third of their working time is used for prevention and health promotion activities.

**Table A8.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	–	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Wedge resection of ingrown toenail</li> <li>• Removal of sebaceous cyst from hairy scalp</li> <li>• Wound suturing</li> <li>• Excision of warts</li> <li>• Removal of rusty spot from the cornea</li> <li>• Joint injection</li> <li>• Strapping an ankle</li> <li>• Setting up an intravenous infusion</li> </ul>	–
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Cholesterol level checking</li> <li>• Family planning/contraceptive care</li> <li>• Routine antenatal care and paediatric surveillance</li> </ul>	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Testing for sexually transmitted diseases</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> </ul>
Health promotion (from a list of 4 items)	–	–

Note:

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

On average, GPs write 1.2 prescriptions per patient on the list per year (Kela, 2010). This number is slowly growing. Use of antibiotics or sleeping pills is at a medium level compared to other Nordic countries. The defined daily doses of antibiotics in ambulatory care is 23.1 per 1000 inhabitants per day (National Agency for Medicines and Social Insurance Institution, 2009).

Concerning the quality of the management of chronic diseases, the results indicate room for improvement. For the adult diabetic population in 2009:

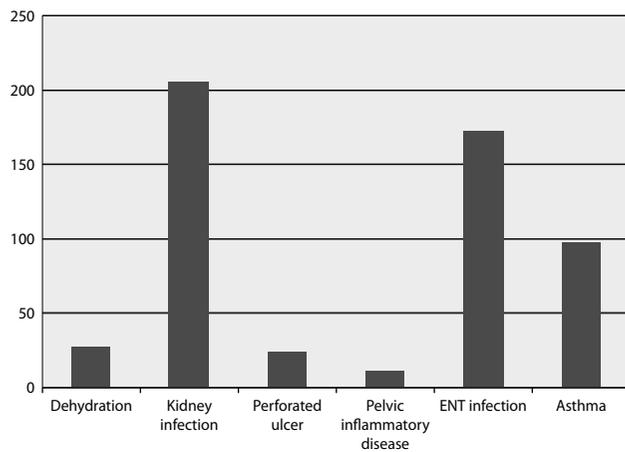
- 30% had a cholesterol level above 5 mmol/l (Conmedic, 2009)
- 52% of patients with high blood pressure had a pressure above 140/90 mm Hg (Conmedic, 2009)

- 41% of type 2 diabetic patients had an HbA1C above 6.9% (Cebolla & Bjornberg, 2008)
- 65% had an eye fundus inspection according to the recommendations in the last 36 months (Conmedic, 2009).

Furthermore, an estimated 65% of individuals with wheeze in the last 12 months or diagnosed with asthma had a follow-up visit in primary care during the last year.

Fig. A8.6 shows the number of hospital admissions for a number of primary care sensitive conditions, to provide insight into the quality of primary care. Hospital admissions are low for patients with dehydration, perforated ulcer and pelvic inflammatory disease. However, relatively high admission rates exist for patients with kidney infection, ENT infection and asthma.

**Fig. A8.6:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in 2008



Sources: THL (National Institute of Health and Welfare) personal communication; Kaypa hoito, 2010.

#### 4.2 Efficiency of primary care

GPs do not usually make home visits, the only exception is home care patients who are visited according to a treatment plan. Most home visits are performed by nurses, and concern elderly care and families with newborn babies.

More and more patient requests are taken care of by telephone.

General practice consultation duration is increasingly becoming longer because many patients have several morbidities and the intention is to handle the treatment plan for all health needs during the same visit. In 2010, the average consultation time was 20 minutes.

The average number of prescriptions per physician (in total) was 442 and per GP was 535 prescriptions in 2009. The average cost of medicines was €46 043 per physician in 2009. The costs had decreased 4.3% from the previous year.

#### Acknowledgements

The authors are grateful to Dr Hannu Halila (of the Finnish Medical Association), Dr Simo Peltari (of THL – National Institute of Health and Welfare) and Dr Pertti Soveri (of Conmedic) for their information and advice.

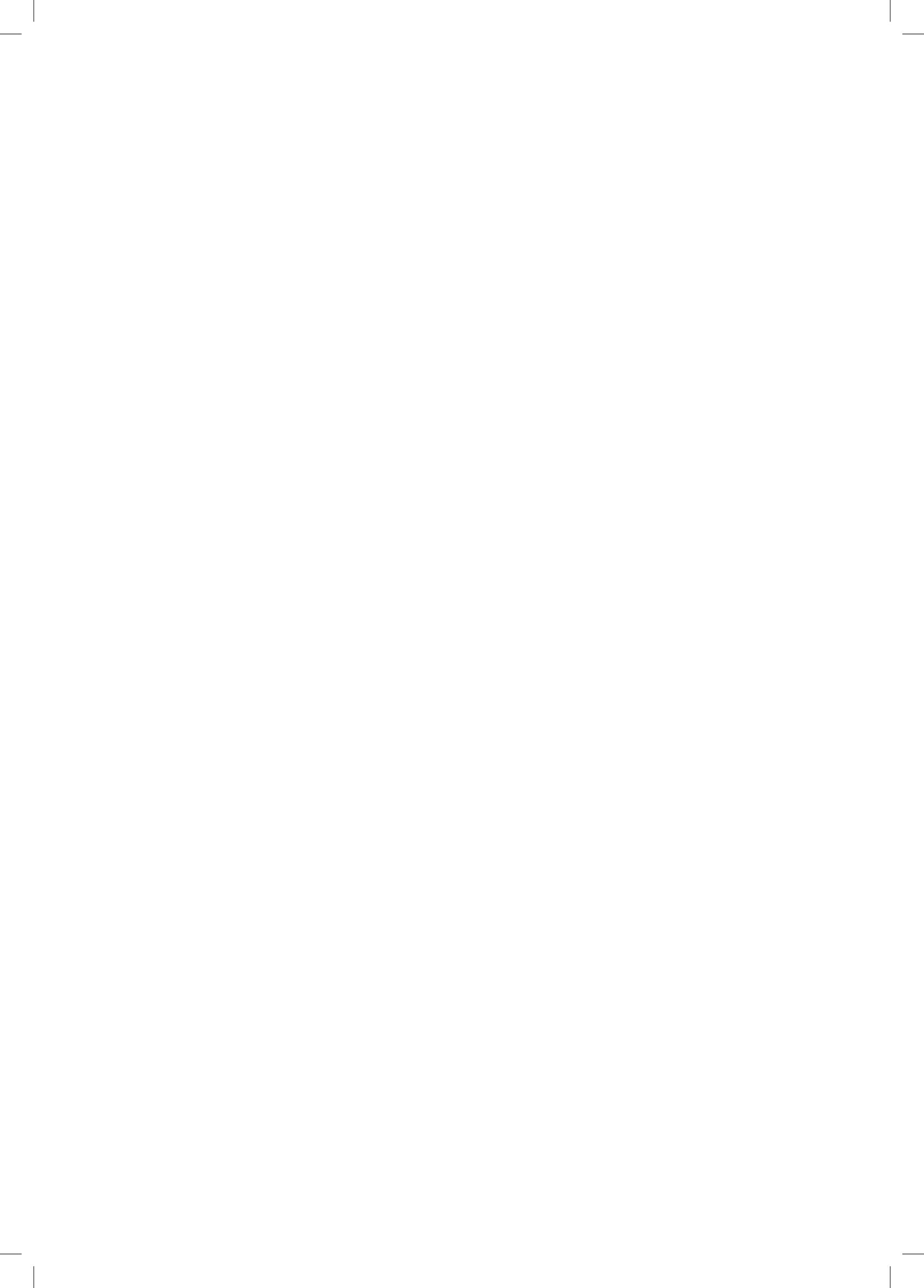
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# 9 France

*T. Cartier, Y. Bourgueil*

## 1. The context of primary care

### Country and population

France is a western European country of 64.35 million inhabitants (Eurostat, 2010) on a territory of 632 759 km<sup>2</sup> (mean density of 100/km<sup>2</sup>) (INSEE, 2008). It is divided into 22 regions and 96 *départements* in the European area and 12 overseas communities (4 being both a region and a *département*). The 2009 population growth was 0.57% and the total fertility rate is one of the highest in Europe: 2.0 children per woman. Currently, 24.8% of French people are aged under 20 years and 16.5% are over 65 years. 51.6% are women (Eurostat, 2010). Because of the baby-boom post-Second World War, it is estimated that more than one-third of the French population will be over 60 years in 2050 (Brutel and Omalek, 2006). Density is very variable in regions, ranging from 34.7 in Corsica to 968.6/km<sup>2</sup> in the capital region, Ile-de-France (Eurostat, 2010).

### Development and economy

France is a democratic and secular Republic based on two national parliaments and is governed by a President and a Prime Minister. The central state has prerogatives over local authorities on almost all policy subjects, but decentralization exists both at regional and department level, particularly for social policies.

France is the eighth largest world economy in 2007, based mainly on services. The GDP per capita is PPP\$ 33 564 (24th in the world) in 2007 (IMF, 2010). France ranked

**Table A9.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	France	EU <sup>1</sup>	France	EU <sup>1</sup>	France	EU <sup>1</sup>	France	EU <sup>1</sup>	France	EU
1995	10.4	7.6	2101	1275.9	892.6	740.9	323.3	292.7	28.8	27.5 <sup>6</sup>
2000	10.2	7.9	2542	1608.0	805.1	669.0	329.6	295.1	28.0	28.3 <sup>5</sup>
2005	11.1	8.5	3303	2150.9	725.3	604.6	337.7	316.0	26.4	26.3 <sup>4</sup>
2009	11.03 <sup>7</sup>	8.8	3601 <sup>7</sup>	2788.2	692.9 <sup>7</sup>	564.8	334.8	321.6	25.9 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	France	EU <sup>2</sup>	France	EU <sup>1</sup>	France	EU <sup>1</sup>	France	EU <sup>1</sup>
1995	590.6	575.1	11.5	12.5	22.9	15.7	6.4	6.6
2000	650.6	655.9	10.8	10.3	22.3	17.7	6.9	6.8
2005	742.2	682.7	10.4	9.5	20.9	16.2	6.6	6.8
2009	793.7	745.5	10.0 <sup>7</sup>	8.8	20.8 <sup>7</sup>	15.6	6.3 <sup>9</sup>	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010). France values are based on Eco-Santé data (Eco-Santé, 2010), with sources from INSEE, DREES, IRDES, CNAM.

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year 2008 instead of 2009. <sup>8</sup> Practising GPs (and non-licensed GPs). <sup>9</sup> Year 2007 instead of 2009.

8th on the Human Development Index with 0.961 (UNDP, 2010). The unemployment rate is quite high for a developed country: 9.5% of active population at the beginning of 2010 (Eurostat, 2010). Concerning education, 69.6% of the population has finished the secondary level of education, but 9% of the population aged between 18 and 65 years old are considered illiterate (ANLCI, 2009).

#### Population's health

Life expectancy at birth in France is high: 84.8 years for women, 77.6 years for men. Healthy life expectancy at age 65 is respectively 9.9 and 9.4 years. Infant mortality was 3.7 deaths for 1000 living births in 2007, among the lowest in Europe. Causes of death are significantly different between men and women: cancer is the main cause (33.1%) for men, followed by cardiovascular diseases (25.5%), whereas it is the opposite for women (23.9% and 30.5% respectively). The other main causes of death are external causes (7.1% total) such as accidents or suicides, respiratory diseases (6.1%) and neurological diseases (5.4%) (Eurostat, 2010).

#### Characteristics of health care system

The history of the French health care system is marked by two principal events. The first is the creation of the National Health Insurance as a branch of Sécurité Sociale, just after the Second World War, which aims at universal coverage, quality of care and solidarity, according to a mandatory scheme for workers (CNAM, 2008). Universal coverage was fully reached in the year 2000, with the creation of the Universal Medical Coverage (CMU) (Ministère de l'Emploi et de la Solidarité [Aubry M], 1999). The second event is the creation of academic hospitals in the year 1958, organized by regions, and creating a duality in the French health care system between ambulatory care, with both specialists and generalists paid on a fee-for-service basis, and specialized, highly technical, predominantly public hospital care. As shown in Table A9.1, overall health care consumption (hospital, ambulatory, pharmaceuticals, etc.) is high in France, when compared to other countries of the same size and same wealth, and became a rising concern in the mid 1990s. This led to a discussion about the problems of poor care integration and the oversupply of health care services offered. Since then, successive reforms with a global philosophy of cost control and rationalization of health care supply and demand have been introduced.

## 2. Structure of the primary care system

### 2.1 Primary care governance

Primary care in France was never defined as having explicit goals until the introduction of the Hospital, Patients, Health, Territories Law in 2009 (Ministère de la Santé et des Sports [Bachelot R], 2009), which aims to reorganize the health care system at a regional level, including primary care. The mission of GPs and primary care professionals are detailed in it, regardless of their practice mode. Responsibility for primary care governance is not organized through one central place or budget, as there is no ministerial department for it, nor a proper budget line. Previous government interventions in primary care governance focused on equality in access, through policies on distribution of human resources. These policies are mostly incentive-based ones. Multidisciplinary collaboration between health professionals is at its beginnings in ambulatory care, because of the lack of legislative support until recently and the dominance of fee-for-service payment for all professionals. But it is a growing process, with many new health networks created in the 1990s and, more recently, multidisciplinary team practices.

The current scheme of governance in primary care is mostly based on the Convention Nationale, a contract between the National Sick Fund and unions of health professionals (which are divided), aiming to regulate the activity of the ambulatory sector by a national agreement (UNCAM et al., 2005). The last one was signed in 2005 for five years, with the specific objectives of improving coordination and quality of care, maintaining and improving access to care, respecting the freedom of choice of patients, and preserving future prospects for ambulatory physicians. At the beginning of 2010 a new Convention Nationale should have been signed, but there was no agreement, so a *règlement arbitral* (arbitral settlement) took place and the Convention Nationale process was repeated until a new Convention between the two parties was signed (Ministère de la Santé et des Sports, 2010). What is currently observed is a kind of translation of responsibility for primary care governance from the National Sick Fund to the government. At the community level, some actions for primary care are taken incidentally, notably by the *départements*, which are responsible for funding centres for mother and child care (République Française, 2007), and by municipalities, which can manage home services and can fund health centres or facilities for self-employed health professionals.

To practise in health care, physicians are required to hold a state diploma in medicine, be of certain nationalities (European, Moroccan or Tunisian), and be inscribed at the *Ordre des Médecins* (the national physicians' association in charge of licensing and physician discipline). To work as a self-employed GP, physicians must be inscribed at the *Unions de Recouvrement des Cotisations de Sécurité Sociale et d'Allocations Familiales (URSSAF)* for the collection of social taxes, and at a local sickness fund (*Conseil National de l'Ordre des Médecins*, 2008). Important mechanisms used to maintain and improve the quality of care include mandatory continuing medical education, the use of clinical guidelines (produced by the High Authority in Health) and protocols for chronic conditions (for which the National Sick Fund reimburses 100% of care costs), and peer-audits (AFFSAPS & HAS, 2006; République Française, 2005). Periodic and systematic assessment of GPs' knowledge and abilities to practise medicine, however, do not exist.

Community influence on the provision of primary care services is organized at local level via ownership of a few primary care facilities by a few municipalities.

Patients' rights in France have been greatly enhanced since the Kouchner Law was introduced in 2002, ensuring, notably, mandatory informed consent, patient access to their own medical files, confidential use of medical records and procedures for patient complaints (Ministère délégué à la Santé [Kouchner B], 2002). Patients are grouped in a national federation and have representatives in national and regional assemblies for health.

### 2.2 Economic conditions of primary care

The primary care budget is included in the overall budget for the ambulatory sector, which also includes specialists. An estimation of primary care expenses suggests that costs are around 19% of all expenditure on health (Eco-Santé, 2010). Preventive care and health promotion account for 2.6% of all expenditures on health (Fenina, Geffroy & Duee, 2008).

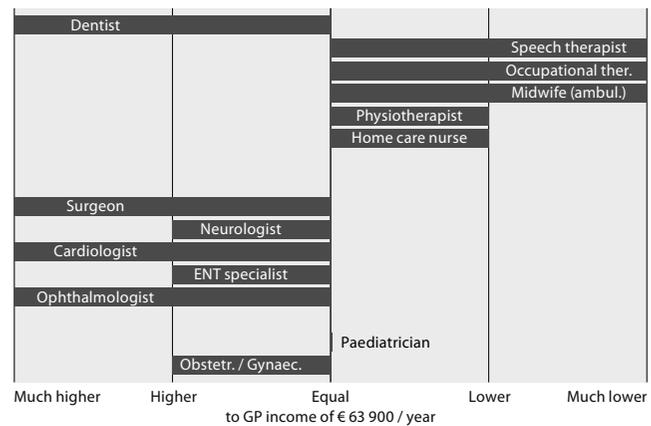
Primary care coverage is universal in France. Since the introduction of the CMU measure, it is estimated that 99.9% of the French population is insured, at least partially, for primary care costs. Immigrants in illegal situations are covered through the State Medical Aid (*Aide Médicale d'Etat [AME]*) measure (Ministère de l'Emploi et de la Solidarité [Aubry], 1999). Co-payments

depend on the nature of the care provided and of the carer. For example, general practice visits are reimbursed by the National Sickness Fund on a 70% basis of an agreed fee, but some GPs from Secteur 2<sup>1</sup> (around 13% of all GPs) can charge more than this. For drugs, the reimbursement varies from 0 to 100% (mostly either 35% or 65%), depending on the drug and its recognized usefulness. So, in order to complete a mandatory insurance scheme, 88.4% of French people are covered by their own complementary insurance, which they purchase themselves (Garnero & Rattier, 2009) and 6% of them by the CMU-c disposal, aimed at the poorest (Ministère de l'Emploi et de la Solidarité [Aubry], 1999). The general tendency is for increasing out-of-pocket payments, even with a complementary insurance, especially for ambulatory care.

About 70% of physicians with a diploma for general practice work in the ambulatory sector on a self-employed basis with a contract with the National Sickness Fund. A further 22% work as salaried physicians for a health authority, mostly in hospitals, where they can no longer be considered as doing primary care (Sicart, 2009). The remuneration system of self-employed GPs is predominantly a fee-for-services scheme (UNCAM et al., 2005). But recent initiatives from the Sickness Fund have tweaked that a bit, with the introduction of an annual fixed sum for coordination of patients with chronic conditions and a voluntary pay-for-performance scheme called CAPI (Contract for Improvement of Individual Practice) (UNCAM, 2009).

The mean net income for self-employed GPs in France in 2006 is €63 900. Fig. A9.1 shows that medical specialists and dentists generally earn (much) more than mid-career self-employed GPs. Their income is most equal to that of paediatricians. Paramedical health professionals generally earn (much) less than GPs (Fréchou & Guillaumat-Tailliet, 2009).

**Fig. A9.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



Source: SNIR.

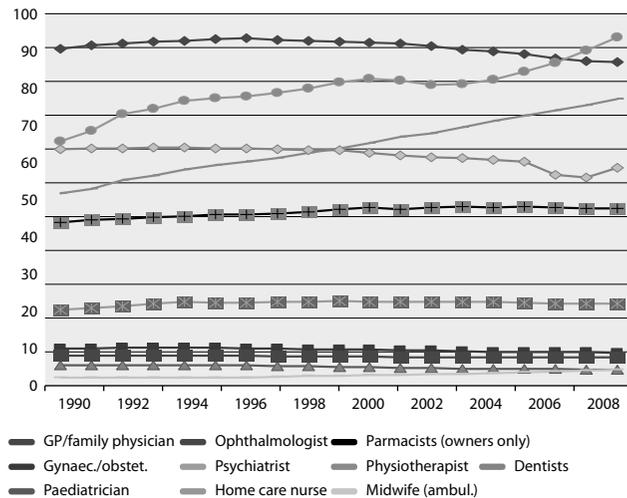
### 2.3 Primary care workforce development

The core of the primary care workforce in France is the self-employed GP, with a contract with the National Sickness Fund. Advanced roles for nurses in primary care do not exist and most of the ambulatory care delivered by nurses is carried out at home, especially for elderly and disabled patients. Other paramedical primary care professionals include mainly dentists (no referral required), pharmacists, physiotherapists and midwives. Ambulatory specialists are also part of primary care, although they do not cover all aspects.<sup>2</sup> Specialists for whom a referral is not required include paediatricians (for children <16 years), gynaecologists, ophthalmologists and psychiatrists (for people <25 years). But other specialists also contribute to primary care, since gatekeeping, recently introduced in France, relies only on financial penalties (République Française, 2004; UNCAM et al., 2005). Some ambulatory self-employed GPs do not provide primary care services as the core of their main practice, by focusing on a sub-specialty such as sports, angiology (i.e. vascular medicine), acupuncture, etc. Fig. A9.2 shows that there is a slow but negative trend in the supply of most primary care professionals over the years. Clear exceptions are home care nurses, and physiotherapists, of which there is a steep increase in supply.

<sup>1</sup> Before 1990, GPs were allowed to choose between Secteur 1 (obligation to charge the patients the agreed fees but pay lower social taxes) and Secteur 2 (freedom regarding prices but no discount on social taxes). Since 1990, GPs are only allowed to choose Secteur 1 (specialists still have access to Secteur 2).

<sup>2</sup> Specialists have some properties of primary care (direct access, sometimes coordination of care) but do not deal with the whole primary care spectrum, especially for diseases. Until quite recently, it was not uncommon (though not the majority of cases) that a cardiologist would also treat the diabetes of his patients, for example.

**Fig. A9.2:** The development in supply of primary care professionals per 100 000 inhabitants



Source: SNIR, for all except psychiatrists (ADELI).

The average age of GPs is 49.2 years and 69.5% of them are aged more than 45 years. The age distribution is quite different between salaried (younger) and self-employed GPs (older) (Sicart, 2009). The workload of a self-employed GP, excluding hours on call, is around 48 hours a week (Le Fur, Bourgueil & Cases, 2009).

General practice has been a specialty in medicine since 2004, which students can choose after finishing their first and second cycle of medical studies (corresponding to the postgraduate training) and taking the Epreuves Classantes Nationales exam (Ministère de l'Éducation Nationale, 2004). The specialty and region they can choose are allocated on a "first classed–first served" basis. Family medicine is often not the first choice. Thus 49.3% of students chose general practice in 2009, but 612 positions were left unfilled (Fauvet, 2010). Among those new residents, a good share (though currently not precisely estimated) will not end up doing primary care, preferring a hospital career. The academic status of general practice is in development, but still quite weak compared with other specialties, especially in terms of academic positions.

Medical associations are mainly unions, with two dedicated to GPs only (MG-France, Union Généraliste), and Continuing Medical Education-certified associations. Journals on family practice only publish in French and thus have a weak impact on the international research community in primary care.

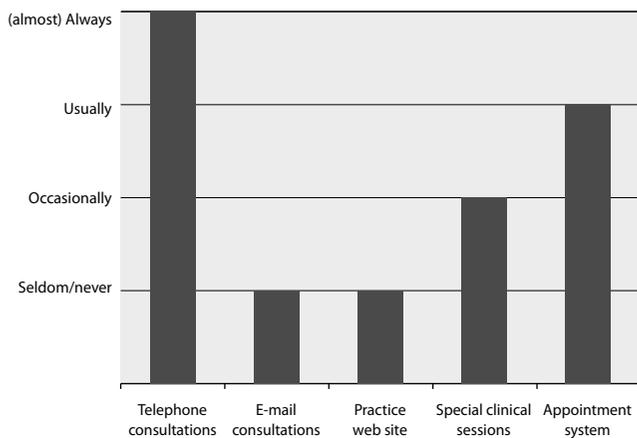
### 3. Primary care process

#### 3.1 Access to primary care services

Access to primary care is becoming a real concern in France, because of a general decreasing supply of physicians, especially GPs (see Fig. A9.2). For them, the most marked difference in supply is between the capital Ile-de-France region and the sunniest metropolitan region Provence–Alpes–Côte-d'Azur, with a mean density of 71.09 and 110.60 GPs per 100 000 inhabitants respectively (Eco-Santé, 2010). These figures are, however, very context-dependent. Ile-de-France has the highest density of hospitals and specialized care, and the situation is very different between Paris and some rural areas of the region. Between rural and urban areas of the country, the difference in densities is high: 78 versus 202 GPs per 100 000 inhabitants respectively (Sicart, 2009). Some norms have been defined to describe shortages of GPs, based mainly on their activity, and their density in an area (Ministère de la Santé – Direction de l'Hospitalisation et de l'Organisation des Soins, 2005), and there are some incentives to attract GPs to those areas where there is a shortage, notably 20% higher fees (Ministère de la Santé et des Sports, 2010; UNCAM et al., 2005).

There is no legislation about the opening hours of primary care practices. Primary care practices generally use an appointment system and offer telephone consultations (see Fig. A9.3) (Dobrev et al., 2008; Levasseur, Bataillon & Samzun, 2004). The after-hours care provision is organized mainly around three modes: voluntary GPs in practice-based services, primary care cooperatives known as SOS Médecins and hospital emergency units (République Française, 2006). The affordability of general practice is not currently at stake, but that of secondary care is.

**Fig. A9.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



### 3.2 Continuity of primary care services

GPs do not currently have a fully implemented patient list system. In fact, patients have to register with a GP in order to be fully reimbursed for their ambulatory costs, but they can choose any type of physician (including a non-GP) and change to a different physician at any time. About 90% of patients declared that their last visit to a GP was with their preferred physician (Allonier, Dourgnon & Rochereau, 2010). Patients reported being satisfied with the available time during consultations (on average 16 minutes), and explanations given by their physician during consultations (Allonier, Dourgnon & Rochereau, 2010; Breuil-Genier & Goffette, 2006).

French GPs use information technology (IT) increasingly frequently at their office: 85% of them routinely keep electronic clinical records of their patients and 87% have an available Internet connection (ORS & URML Pays de la Loire, 2008), but IT systems for communication between practices or with pharmacies or hospitals barely exist. For referrals, GPs use a letter in 95% of cases (Bournot, Goupil & Tuffreau, 2008), but they do not always get information back; this varies from “usually” by specialists they are used to working with to “almost never” from out-of-hours care providers.

### 3.3 Coordination of primary care services

The gatekeeping system in France has been in place since 2005 (République Française, 2004; UNCAM et al., 2005). If a patient is not referred by his preferred physician, he/she is penalized by a decreased reimbursement and by the possibility of the specialist asking for extra fees (Dourgnon & Naiditch, 2009).

Complementary insurance are not allowed to make up for the difference from a normal reimbursement. The only exceptions to this system are: emergencies, new preferred physician, distance to the preferred physician. A referral is not required to visit a gynaecologist/obstetrician, an ophthalmologist, a dentist or stomatologist at all ages, a paediatrician if under 16 years and a psychiatrist if under 25 years.

Formalized skill-mix within primary care is unusual. After the pre-eminence of the single-handed practice, now most of the practices are group practices (54%), in which GPs share the same physical or fiscal structure but usually do not share patients (Baudier et al., 2010). This happens only in health centres (where GPs are salaried) or in currently promoted multidisciplinary team practices (Maisons de Santé), but these represent respectively 1.2% and 0.4% of GPs (Sicart, 2009). Apart from these structures, regular face-to-face meetings with other health professionals are uncommon, but occur more frequently by phone (Bournot, Goupil & Tuffreau, 2008). Nurse-led substitution of care for health education and prevention is very limited: around 60 ambulatory structures concerning health education and diabetes clinics exist in France (Haute Autorité de Santé, 2008; Saout et al., 2008). The only medical act ambulatory nurses are able to do without a prescription is seasonal flu vaccination for the target population.

Cooperation with secondary care and other services is not usual either. Joint consultations or replaced specialist care occur very rarely and GPs do not usually take phone advice from specialists. Data from patient records in general practice is only used at a local level to identify health needs.

### 3.4 Comprehensiveness of primary care services

Around 81% of total patient contacts are handled solely by GPs without referrals to other providers (Allonier, Dourgnon & Rochereau, 2010). GPs in France offer a large range of services (see Table A9.2), including diagnosis and follow-up for chronic conditions, although it seems they are less inclined to undertake technical acts, such as gynaecological examination, ECGs or minor surgery. Service style also depends on the immediate surroundings of specialized care: the more specialists that are present in the area of the GPs, the less s/he will perform technical procedures.

**Table A9.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with psycho-social problems</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	<ul style="list-style-type: none"> <li>• Man aged 28 with a first convulsion</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Mild depression</li> </ul>	<ul style="list-style-type: none"> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Excision of warts</li> </ul>	<ul style="list-style-type: none"> <li>• Removal of rusty spot from the cornea</li> <li>• Fundoscopy</li> <li>• Setting up an intravenous infusion</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Testing for sexually transmitted diseases</li> <li>• Screening for HIV/AIDS</li> <li>• Influenza vaccination for high-risk groups</li> </ul>	<ul style="list-style-type: none"> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> </ul>	–

Note:

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

GPs are also heavily involved in screening for particular diseases, such as breast cancer, sexually transmitted infections or cardiovascular risk factors. Along with centres for mother and child care and paediatricians, they perform most of the vaccinations.

So far as health education and promotion is concerned, it is mostly done at the single-patient level. Some health networks, health centres or multidisciplinary team practices are doing groupwise health education. But, as we have seen already, these forms of organization in primary care are currently rare. Most health education practice is concentrated in hospitals, where GPs do not take part.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

Several indicators for quality as an outcome of a primary care system have been identified by the PHAMEU project.

French GPs are known to have a tendency to be heavy prescribers: around 75% of all visits to a GP end with a drug prescription (Allonier, Dourgnon & Rochereau, 2010; Gallais, 1994; Labarthe, 2004). About 28.7 DDD/1000 inhabitants/day of antibiotics were prescribed by ambulatory physicians (including, but not only, GPs) in 2007 (Muller et al., 2007).

Concerning the quality of the management of chronic diseases, results are mixed. For the adult diabetic population, in 2007:

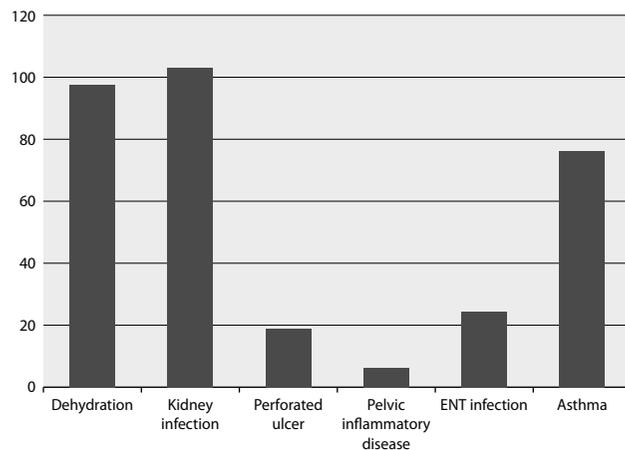
- 39% were overweight, 41% obese
- 50% had an eye fundus inspection in the last 12 months
- 41% had an HbA1C > 7%
- 38% had a blood pressure above 140/90 mmHg
- 18% had a LDL-cholesterol serum level above 3.35 mM (Institut National de Veille Sanitaire, 2010).

It is estimated that asthmatic patients have around 2.1 general practice visits related to their disease every year (Com-Ruelle, Da Ooian & Le Guen, 2010), and COPD patients around 10 (Fournier et al., 2005).

The vaccination coverage is high but could be improved: 90.6% for diphtheria, tetanus and pertussis, 74.2% for measles, mumps and rubella and 38.9% for hepatitis B in 10-year-old children (Fonteneau et al., 2008). In 2008, 64% of the population aged 64+ were vaccinated against flu (UNCAM, 2008).

The number of hospital admissions for primary care sensitive conditions provides insight into the quality of care provided at primary care level. Fig. A9.4 shows that relatively high hospital admission rates occur in France (in 2008) for patients with a diagnosis of kidney infection, dehydration and asthma.

**Fig. A9.4:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



Source: Marcoux and ATIH, 2010.

#### 4.2 Efficiency of primary care

The popular image of a GP in France is a very busy physician working quickly, alone, doing two things or more at the same time, like answering a phone call for appointment and a visit, often late. Is reality far from this description?

General practice consultations take place at the patient's home in 12.6% of cases (Eco-Santé, 2010). There was a rapid decrease in home visits at the beginning of the year 2000, following stricter rules from the Sickness Fund for reimbursement of such visits (only if medically needed). This tendency seems to be coming both from physicians and patients. Telephone consultations are quite rare – 3.36% of all GP–patient contacts (Le Fur, Bourguel & Cases, 2009). Office visits last 16 minutes on average, and home visits 18 minutes (Breuil-Genier & Goffette, 2006), but this covers very diverse situations from a common cold which will merely take 10 minutes to serious somatic or psycho-social problems with consultations lasting more than half an hour, especially for patients with chronic conditions. The same reasoning can be applied to the average number of contacts per patient per year, 4.2 (Eco-Santé, 2010), which hides the complexity of reality, ranging from young adults consulting sometimes less than once every five years to people with multiple pathologies who are seen at least once every month.

Between 5 and 19.9% of general practice consultations end with a referral (Allonier, Dourgnon & Rochereau, 2010; Gallais, 1994; Labarthe, 2004).

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# 10 Germany

*D. Simic, S. Wilm, M. Redaelli*

## 1. The context of primary care

### Country and population

The Federal Republic of Germany, together with its capital Berlin, consists of 16 states each of which are primary administrative divisions. These in turn are structured into municipalities, the smallest administrative division.

Germany has a total area of 357 111.91 km<sup>2</sup> and borders in the north on the North Sea and the Baltic Sea, in the south on the Alps. With 81.75 million inhabitants it has the largest population in Europe, with a population density amounting to approx. 229 inhabitants per km<sup>2</sup>.

Like many industrial states Germany has to face demographic change, with a decreasing and at the same time ageing society and a fecundity rate of 1.4 children per woman – one of the lowest in Europe.

### Development and economy

Germany belongs to the countries with a social market economy. With a GDP of total US\$ 3.667 billion (nominally) in 2008 and a per capita GDP of US\$ 40 875, Germany had the largest national economy in Europe and the fourth largest in the world. Germany ranked 10th on the Human Development Index with 0.885 (UNDP, 2009). The unemployment rate was 6.8%, below the EU average (9.6%) in 2010 (Eurostat,

**Table A10.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Germany	EU <sup>1</sup>	Germany	EU <sup>1</sup>	Germany	EU <sup>1</sup>	Germany	EU <sup>1</sup>	Germany	EU
1995	10.1	7.6	2267	1276	968.3	740.9	306.5	292.7	21.7	27.5 <sup>6</sup>
2000	10.3	7.9	2669	1608	911.9	669.0	326.0	295.1	20.3	28.3 <sup>5</sup>
2005	10.7	8.5	3353	2151	846.8	604.6	341.1	316.0	19.5	26.3 <sup>4</sup>
2009	10.5 <sup>7</sup>	8.8	3737 <sup>7</sup>	2788	821.3 <sup>7</sup>	564.8	355.7 <sup>7</sup>	321.6	18.4 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Germany	EU <sup>2</sup>	Germany	EU <sup>1</sup>	Germany	EU <sup>1</sup>	Germany	EU <sup>1</sup>
1995	n.a.	575.1	13.5	12.5	19.2	15.7	6.4	6.6
2000	958.8	655.9	11.4	10.3	20.5	17.7	7.3	6.8
2005	1022.3	682.7	10.2	9.5	19.9	16.2	7.5	6.8
2009	1068.0 <sup>7</sup>	745.5	9.9 <sup>7</sup>	8.8	20.7 <sup>7</sup>	15.6	7.8 <sup>7</sup>	6.9

Sources: EU and Germany data from WHO European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008.

2010). Concerning education, 60% of the population has finished its upper secondary level of education (in 2007) (OECD, 2010).

#### Population's health

The age structure in Germany is: 0–14 years: 13.8%, 15–64 years: 66.2% , 65 years and over: 19.9% (2007), with the overall male to female ratio of 0.96/1.

Life expectancy at birth in 2007 was 82.7 years for women and 77.4 years for men. Infant mortality is among the lowest in Europe with 3.9 deaths per 1,000 live births in 2007 (OECD, 2010).

Illnesses such as coronary heart disease, diabetes mellitus and cancer are important causes of mortality in Germany.

#### Characteristics of the health care system

About 90% of the German population are insured through approximately 190 statutory health insurance companies. Currently the membership rates are equal for all paying members of all health insurance companies, at 15.5% of before-tax income. The employer and employee each pay about half of the rate. Family members without

their own income are co-insured free of charge since statutory health insurance is based on the solidarity principle.

About 10% of the population are insured by private health insurance. Their membership rate is calculated by the insurance companies according to age group, sex and possible risk factors of the insured person. As no statutory limits exist, membership rates rise exponentially with age.

As shown by Table A10.1, overall health consumption (hospital beds, length of stay in hospitals, acute hospital admissions, outpatient contacts) is high in Germany when compared to the EU averages. In 2008, 10.5% of GDP is spent on health care. Health expenditures per capita are also above the EU average. Even though the total supply of physicians and nurses is relatively high, the percentage of GPs (18.4%) of all physicians is below the EU average (WHO Regional Office for Europe, 2010).

## 2. Structure of the primary care system

### 2.1 Primary care governance

In Germany, primary care includes all doctors treating patients on an outpatient basis without a clear separation of the expertise of the doctor or of their specialty. Access

does not depend on the patient's problem or disease. Thus, for example, diabetes can be and is treated by GPs as well as by specialists (diabetologists) for this specific disease. Every patient has a free choice of doctor.

Hence the separation (inpatient versus outpatient; specialists versus generalists) in the health care system is steered through the German reimbursement system, which creates financial incentives for the treatment of certain health conditions by certain professions.

The second incentive in the separation of the health care system lies in the nature of the patient's condition. Clinical problems that are complex are usually referred immediately to the relevant specialist. Cases requiring treatment which lies beyond the usual care are mostly passed on immediately to the respective field.

Physicians treating statutory health-insured patients are organized in regional associations of statutory health Insurance Physicians. They have to provide all personal acute health care services (*Sicherstellungsauftrag*). This includes the obligation to meet the health needs of the population, to guarantee provision of state-wide services in all medical specialties and to obtain a total, prospectively negotiated budget from the sickness funds which the associations distribute among their members. They are obliged to secure the provision of ambulatory care during practice hours and out-of-hours services.

At national level, no policy documents have been issued by government or important stakeholders that reflect a clear vision on current and future primary care. This lack of central focus on primary care is also reflected in the absence of a primary care unit within the Ministry of Health and within the state inspection on health care, and in the lack of a specific budget for primary care that can be distinguished from other sectors (Federal Ministry of Health, 2010).

Responsibilities for primary care have been decentralized to regional level. The regional associations of statutory health insurance physicians (Kassenärztliche Vereinigung) are responsible for the development of a "location plan" in which the number and the regional distribution of self-employed physicians is specified. The Regional Structural Plan for Health, the development and implementation of which is compulsory since 1977 (revised 1993), includes planning for primary care in each federal state (Kassenärztliche Vereinigung Baden Württemberg, 2009).

A special feature in the regulation of medical services of the German health care system is the important role, alongside that of the legislature, played by the self-governing bodies of service providers and health insurance funds. The legislature creates the legal framework; the medical self-governing bodies, formed by the national associations of doctors and dentists, the German Hospital Federation and the federal associations of health insurance funds, formulate and implement in detail which services will be provided and under what conditions. Since 2004 national groups representing patients have the right to file applications and to participate in the consultations of the Federal Joint Committee (G-BA). The paramount decision-making body of self-government is the G-BA. The G-BA has been institutionalized as a legal entity under public law. It has wide-ranging regulatory powers which are laid down in Volume Five of the *Social Code Book* that governs statutory health insurance (Federal Ministry of Health, 2011).

One important area of responsibility of the G-BA is the assessment of new methods of medical diagnosis and treatment. In the sphere of ambulatory (outpatient) care in particular, the G-BA represents the "eye of the needle" through which a new method must gain a positive evaluation by the G-BA in terms of benefit and efficiency before it can be reimbursed by the statutory health insurance funds.

The G-BA issues the directives that are necessary for safeguarding medical service provision. These aim to ensure that medical services for those with statutory health insurance in Germany are adequate, appropriate and efficient. The G-BA issues directives, for example, for such fields as screening, dental treatment, psychotherapy and rehabilitation.

The G-BA has a central responsibility in the field of medical service provision for those with statutory health insurance. This does not concern the question of licensing pharmaceuticals for the German market, which is the task of the Federal Institute for Drugs and Medical Devices (BfArM). The G-BA regulates remuneration exclusions and restrictions in provision of drugs through directives based on the efficiency requirement.

In addition, the regulatory powers of the G-BA encompass recommendations on requirements regarding the content of disease management programmes. The aim of these programmes is to improve the treatment

and the quality of medical provision for chronically ill patients. The diagnostic and therapeutic measures are based on nationally and internationally recognized (evidence-based) guidelines and transfer into practice is supported by appropriate quality assurance measures. For example, the German College of General Practitioners and Family Physicians (DEGAM) issues evidence-based clinical guidelines for specific use by GPs.

Furthermore, the G-BA has been assigned a range of responsibilities with respect to quality assurance in the health care system. In this field the G-BA issues directives governing quality assurance in the ambulatory, inpatient and intersectoral spheres. All directives issued by the G-BA are submitted for approval to the Federal Ministry of Health (BMG) (DEGAM, 2011; G-BA, 2011; Schwartz, 2000).

Patient rights, such as rights to informed consent, access to own medical records, confidential use of medical records and availability of procedures to process patient complaints in primary care facilities have all been regulated by law (NASHIP, 2011).

## 2.2 Economic conditions of primary care

There are no official statistics available of the total expenditure on primary care. It is only known that in 2008, 15.3% of the total health expenditure was spent on outpatient care, and 4.0% was spent on prevention and public health (Federal Statistical Office, 2010).

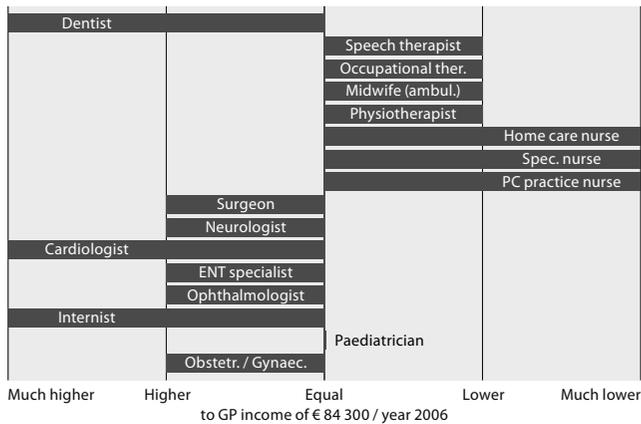
About 90% of the German population are insured through statutory health insurance and about 10% by private health insurance (OECD, 2009). The German government has introduced a co-payment of €10 per calendar quarter to be paid by individuals covered under statutory health insurance upon their first contact with a physician's or dentist's office; this money will go to statutory health insurance. Subsequent visits to the same physician during the same quarter do not require a co-payment. Similarly, visits to other physicians during the same quarter do not require a co-payment if the patient presents a referral from the first physician. However, patients who visit another physician during the same quarter without a referral by the first physician must make an additional co-payment of €10. Thus, if a patient always presents a referral from the first physician, the total fee will be €10 per quarter.

Exceptions to this regulation are solely preventive visits (health check, cancer screening, vaccination) (Schreyögg & Grabka, 2010). Those with private health insurance and some individuals under governmental schemes are also exempt from the co-payment regulation. Children and adolescents up to the age of 18 who are covered by statutory health insurance are excluded, as well. In order to reduce the financial burden of the various co-payments, individuals covered by statutory health insurance who have spent more than 2% of their gross household income per annum on co-payments of any kind (e.g. for pharmaceuticals) are eligible for exemption from the physician fee. This also applies to statutory health insurance members with chronic conditions once they have spent more than 1% of their gross household income per annum on co-payments of any kind (the so-called 1% rule) (Schreyögg & Grabka, 2010).

A Eurobarometer survey showed that 10% of the population rated general practice care as not very or not at all affordable in 2007 (European Commission, 2007).

Almost all GPs (approximately 87%) are self-employed with a contract to a health insurance company, receiving a mix of capitation and fee-for-service payment. Only approximately 13% are salaried employed, receiving a flat salary (NASHIP, 2010). The reimbursement structure within primary care is very heterogeneous. While dentists or cardiologists, for example, earn high salaries, other professional groups earn much less. As Fig. A10.1 shows, the income of an average GP (€84 300 excluding practice costs in 2006) is relatively low compared to medical specialists. For self-employed GPs, not only is the number of patients important for their income, but also the timing of their visits. Since GPs receive their reimbursement per patient and per quarter "all-inclusive", if the patient comes to the practice for a second or further time during the quarter, the GP receives no further reimbursement (Vetter, 2009).

**Fig. A10.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

As a result of the distinctive demography in Germany, the workload increases, and at the same time, so does the number of chronically sick persons, requiring an increase in the number of GPs. Thus there is an increasing lack of GPs. The reasons for this lack are numerous but, in summary, one can focus on the lack of attraction of this profession as an important reason. This leads to the fact that very few of the younger medical generation want to become GPs. Less than 10% of all medical graduates annually choose to enrol in vocational training in family medicine (in 2009) (NASHIP, 2010).

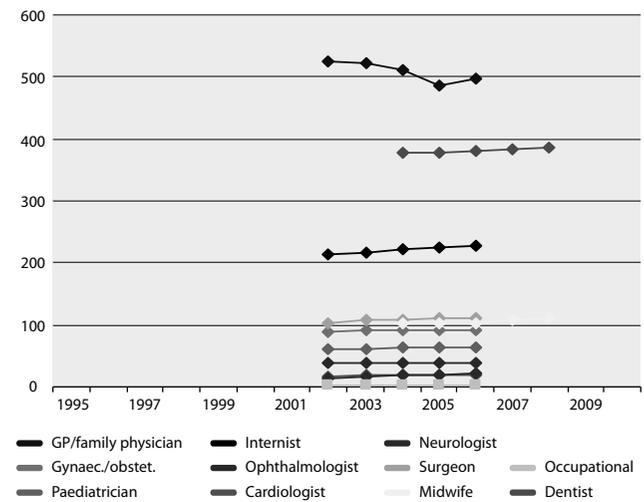
This lack of GPs is aggravated by the demographic picture of the GPs workforce. In 2008, 2% of the GPs were younger than 35 years of age, 54.8% were between 35 and 49 years of age, 31.7% between 50 and 59 years of age, and 11% were 60 years or older (NASHIP, 2010). Therefore, most of the current GPs will not practise 15 years from now.

The present practice of enlisting GPs from foreign countries has so far had only moderate success. The reasons are linguistic problems and low financial incentives or unattractive terms of employment for the individual doctors. At the same time, other nations with similar problems compete with Germany in the same marketplace.

Fig. A10.2 shows the general declining trend in supply of GPs, and the relatively stable supply of other primary care professionals over a five-year period (Eurostat, 2010). If the younger generation will not step in, this development

will lead to a providers' gap which cannot be adequately filled by other medical fields. There is also a lack of specialists to be observed in Germany to some extent.

**Fig. A10.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



To work as a GP, vocational training lasting at least five years is required. This consists of two years of training in an inpatient department of internal medicine, and 18 months of training by a self-employed GP or in a group practice. The remaining 18 months can be spent in training with a GP or in an inpatient department of internal medicine.

To work as a paediatrician or gynaecologist, vocational training of at least five years is required. For all ambulatory care doctors there is an obligatory continuing medical education credit system (250 credits every five years) (German Medical Association, 2008).

About 32 000 GPs are members of the Federation of General Practitioners (Hausärzteverband), and 3300 GPs belong to the German College of General Practitioners and Family Physicians (DEGAM).

There are three primary care journals published in Germany: *Zeitschrift für Allgemeinmedizin* (12 issues annually; 3085 subscriptions), *Der Hausarzt* (20 issues annually; 54 500 subscriptions), and *Der Allgemeinarzt* (20 issues annually; 50 092 subscriptions).

### 3. Primary care process

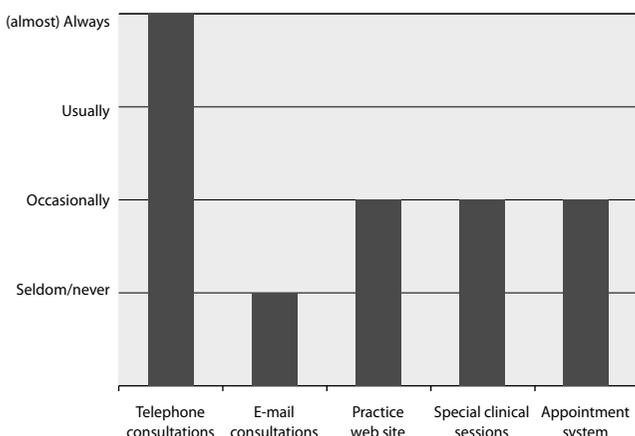
#### 3.1 Access to primary care services

Direct access is possible to all physicians and non-physicians without referral. However, the statutory health insurance can refuse to reimburse the costs (partially) of a direct visit without a referral from a GP (see section 2.2).

There are big regional differences in the distribution of GPs, ranging from 73.2 GPs per 100 000 inhabitants in the federal state of Baden-Wurttemberg to 60.8 GPs per 100 000 inhabitants in Saxony. Besides, there is a big urban–rural difference in supply in favour of urban areas. For example, Heidelberg has a GP population of 166% of the national average while a rural example, such as the municipality Saalkreis, has only 67% of the average (Die Gesundheitsberichterstattung (GBE) des Bundes, 2009). Workforce forecasting studies have shown that shortages exist in some regions in Germany (Kopetsch, 2010). However, a Eurobarometer survey showed that 94% of the population found it easy to reach and gain access to GPs (2007) (European Commission, 2007).

General practices are not legally bound to a minimum number of opening hours (Bundesministeriums der Justiz & GmbH, 1957). They only occasionally use an appointment system (see Fig. A10.3). A special service for people with specific problems, such as diabetes, is unusual in a German general practice (less than 10%). Practices often offer telephone consultations, but seldom offer e-mail consultations. GPs work on average 51 hours per week (in 2006) (Koch, Gehrman & Sawicki, 2007). In 2002, they on average performed 25 home visits per week (Snijder et al., 2007).

**Fig. A10.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



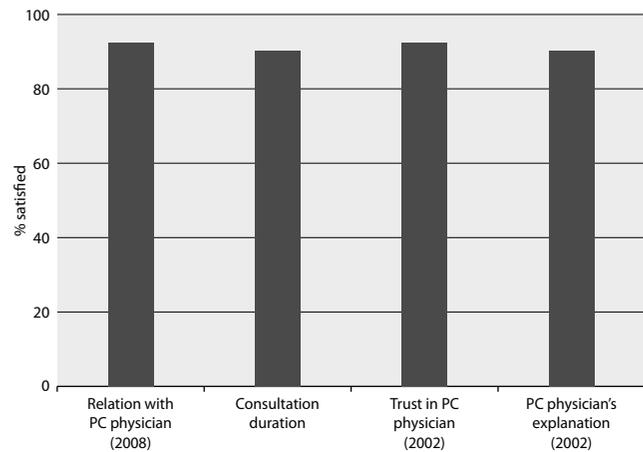
Outside general practice opening hours, patients can receive care by visiting the emergency service of the panel-doctor union or visit a hospital emergency department.

#### 3.2 Continuity of primary care services

GPs do not have a patient list system. However, it is estimated that each GP is responsible for about 2000 inhabitants.

Patients have a free choice of doctor, and can change their GP any time. Nevertheless, the doctor–patient relation seems to be stable as 95% of statutory health insurance patients in 2008 reported visiting their usual primary care provider for their common health problems (NASHIP, 2008). The same survey showed that almost all patients were satisfied with several aspects of their primary care services (see Fig. A10.4). The prevailing number of patients were even satisfied with the duration a general practice consultation, which is on average only 7–8 minutes (Deveugele et al., 2002).

**Fig. A10.4:** Patient satisfaction with aspects of care provision



Source: NASHIP, 2008.

By now almost all general practices in Germany use a computer, but in most cases only for keeping medical records, financial administration and prescribing medicines. Computers are hardly used as a support system for communication with patients, to contact other professional disciplines or for research (Dobrev et al., 2008).

GPs always use referral letters to refer a patient to a medical specialist. After an episode of treatment with medical specialists, or out-of-hours care, the care providers usually communicate back to the GP about the care provided.

**Table A10.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Woman aged 35 with psycho-social problems</li> <li>• Man with suicidal inclinations</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	<ul style="list-style-type: none"> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man aged 28 with a first convulsion</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Setting up an intravenous infusion</li> </ul>	<ul style="list-style-type: none"> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from the cornea</li> <li>• Fundoscopy</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> <li>• Routine antenatal care</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> <li>• Counselling in case of problematic alcohol consumption</li> </ul>	–

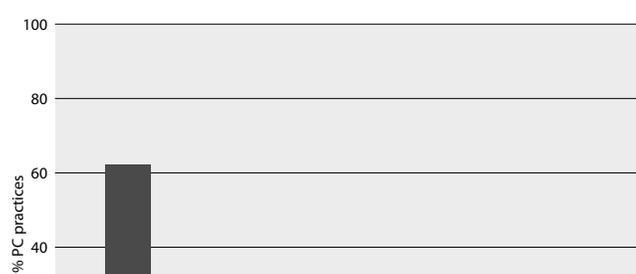
Note:

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

### 3.3 Coordination of primary care services

There is no gatekeeping system in Germany. All medical professions can directly be accessed by patients with few exceptions. Direct access to a home care nurse, physiotherapist, occupational therapist or speech therapist is only possible if the costs of the visit are paid out of pocket by the patient.

In Germany the GP is still mainly alone in his or her practice (single-handed practice), although there has been a strong trend towards practices with multidisciplinary cooperation during the last five years. In Fig. A10.5 the distribution of the practice forms is shown.

**Fig. A10.5:** Shared practice

The principal reason for this trend is, above all, a financial incentive which is achieved by the reduction of the economic risk of working in groups. Other reasons are secondary. Other practice structures, such as facilities or medical centres in which nurses coordinate care, do not seem to exist in Germany.

Communication with other GPs does take place occasionally, but rarely with specialists. Contact between nursing facilities and GPs occurs only according to demand. Communication between GPs and hospitals is problematic. Hospital discharge letters are infrequently sent and verbal communication between the clinicians and GPs is rare. There is rarely any routine integration of other professional disciplines by GPs in the care of their patients.

### 3.4 Comprehensiveness of primary care services

Normally general practices are only have equipment which permits basic diagnostics. For example, patients with ophthalmological problems or patients with gynaecological syndromes regularly visit the respective specialist directly. The list of available equipment in general practices is therefore limited.

Table A10.2 shows the involvement of GPs in several primary care services. Given the system, any medical specialist can provide these services as well. It is estimated that on average 75–80% of total patient contacts are handled solely by GPs without referrals to other providers.

For many chronic illnesses the GP plays the central role in the health care services delivery, with exception of rheumatoid arthritis. Specialists are called in only if there is severe illness or complications.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

The quality of primary care is very variable and dependent on financial incentives. Quality has clearly been improved by the introduction of disease management programmes (DMP) in the care of patients with chronic illnesses, such as diabetes mellitus. Indeed, further optimization is needed. The following three examples show the quality of primary care in Germany.

According the data of EUPHIX in 2005 (RIVM, 2009), which were collected before the DMP era, 56% of people with diabetes had high values for cholesterol, 25% had high blood pressure, 54% had high HbA1C, 44% were overweight and only about 32% of the population with diabetes had been to the ophthalmologist for funduscopy during the last 12 months. The picture is different in respect of vaccinations to infants, where the rates are high.

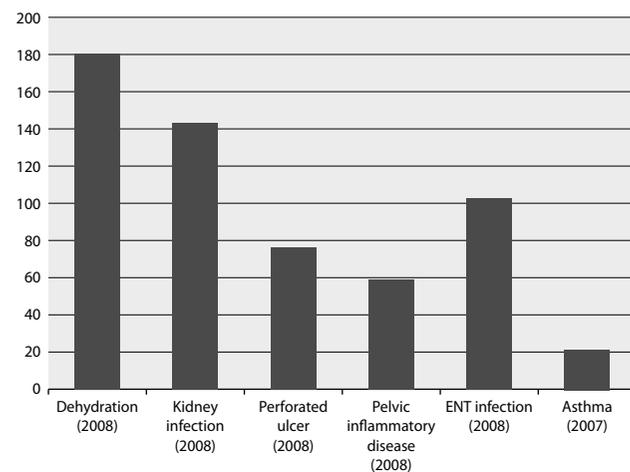
With the exception of the vaccination against hepatitis B the other common vaccinations have a minimum coverage of 90%. Vaccinations for children are carried out predominantly by paediatricians and only to a small extent by GPs.

A third example comes from mammography and gynaecological screening (arranged by gynaecologists). About 54% of women aged between 52 and 69 years underwent a mammography during the last three years,

about the same rate as for women between 21 and 64 years who have had a Pap test during the last three years (55.9%) (Kooperationsgemeinschaft Mammographie, 2010; Linos & Riza, 2000; Schopper & De Wolf, 2007; Von Karsa et al., 2007).

And finally, Fig. A10.6 presents relatively high hospital admission rates for people with dehydration, kidney infection and ENT infection (in 2008). These are all primary care sensitive conditions and give an indication of the quality of primary care services (Die Gesundheitsberichterstattung (GBE) des Bundes, 2009).

**Fig. A10.6:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



### 4.2 Efficiency of primary care

With 18 contacts per patient per year the Germans are high frequency visitors to their GPs (Grobe, Dörning & Schwartz, 2010). Average consultation time is 7.6 minutes.

On average, a GP sees 242 patients per week, for which he or she needs approximately 70% of his or her working hours to provide direct care. The 25 home visits per week on average are included in the total. It is known that on average, 12% of the GPs' patients need at least one home visit annually. These are predominantly women and elderly people (Deveugele et al., 2002).

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# 11 Greece

*C. Lionis, P. Tedeschi, A. Saridaki*

## 1. The context of primary care

### Country and population

Greece is a southern European country covering 131 957 km<sup>2</sup> of mountainous interior with coastal plains bordered by the Aegean, Ionian and Mediterranean seas. The multiple islands in the Aegean and Ionian seas occupy one-fifth of its territory. It has a total population of 11.26 million (0.96 male/female) (UNDP, 2009) with a median age of 41.8 years (WHO Regional Office for Europe, 2009). The overall population density is 83.1/km<sup>2</sup> and the highest density is in the prefecture of Athens, the capital of Greece. The annual growth rate in 2007 was 0.3% and the population aged 0–14 years is 14.3% (male 788 722/female 742 270) and 65+ years is 18.7% (male 902 617/female 1.16 million) (WHO, 2009).

### Development and economy

Greece has been a member of the EU since 1981. It is a parliamentary republic where the head of the government is the Prime Minister, who is voted in to office by plurality vote in election and forms a government (CIA, 2010). Greece is divided into 51 prefectures, Athens being the capital city. The GDP per capita is US\$ 31,000 PPP, ranked 44th in the world (CIA, 2010). According to the UNDP's 2009 rankings, Greece ranked 25th of the 182 countries on the Human Development Index with a value of 0.942 (UNDP, 2009). The unemployment rate is quite high; in June 2010 it was 12.2% (Eurostat, 2010). The adult literacy rate is 97.1% (UNDP, 2009).

**Table A11.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Greece	EU <sup>1</sup>	Greece	EU <sup>1</sup>	Greece	EU <sup>1</sup>	Greece	EU <sup>1</sup>	Greece	EU
1995	n.a.	7.6	16.697	1275.9	n.a.	740.9	398.1	292.7	n.a.	27.5 <sup>6</sup>
2000	9.7	–	20939	1608.0	n.a.	669.0	n.a.	295.1	n.a.	28.3 <sup>5</sup>
2005	10.10	8.5	29578	2150.9	481.7	604.6	534.6	316.0	n.a.	26.3 <sup>4</sup>
2009	n.a.	8.8	31000	2788.2	n.a.	564.8	n.a.	321.6	37.2	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Greece	EU <sup>2</sup>	Greece	EU <sup>1</sup>	Greece	EU <sup>1</sup>	Greece	EU <sup>1</sup>
1995	n.a.	575.1	n.a.	12.5	n.a.	15.7	n.a.	6.6
2000	n.a.	655.9	n.a.	10.3	n.a.	17.7	n.a.	6.8
2005	n.a.	682.7	n.a.	9.5	n.a.	16.2	n.a.	6.8
2009	350**	745.5	n.a.	8.8	15.39**	15.6	n.a.	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010). Sources for Greece data: WHO Regional Office for Europe, 2010; Gesundheit Österreich, 2007; WHO Regional Office for Europe, 2009\*\*, Eurostat, 2008.

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO.

### Population's health

The total population's life expectancy at birth is 79.7 years, the total life expectancy for males is 77.1 years and for females is 82.4 years. The healthy life expectancy at birth for males is 71 years and for females is 74 years (CIA, 2010). The total fertility rate is 1.37 children born/woman. The number of infant (under 1 year) deaths per 1000 live births in a given year was 2.65 in 2008 (WHO Regional Office for Europe, 2010). In Greece, the top five causes of death for all ages are: cerebrovascular disease (20%), ischaemic heart disease (15%), trachea, bronchus, lung cancers (6%), colon and rectum cancers (3%), upper respiratory infections (2%) in 2002. The top five disease burdens are: noncommunicable diseases, cardiovascular disease (mainly cerebrovascular disease), malignant neoplasms, ischaemic heart disease and trachea, bronchus, lung cancers (WHO Regional Office for Europe, 2004).

### Characteristics of the health care system

In Greece, the financing of health care is funded through the central government's budget through state insurance funds and private insurance schemes. The private sector has gradually increased during the 2000s. There is universal coverage for pharmaceutical care. The Ministry of Health and Social Solidarity holds the main role for

health policy and the planning and implementation of pharmaceutical policy. It is also responsible for the provision and financing of the National Health Service, an addition to the health and social services for poor, elderly and disabled people.

Greece is divided into seven regional health authorities (DYPE). The social insurance organizations are (1) IKA (Institute of Social Insurance) – 50% of the population, (2) OGA (Organization of Agricultural Insurance) – 25% of the population, (3) civil servants – 7% of the population, (4) TEVE-TAE (Fund for Merchants, Manufacturers and Small Businessmen) – 13% of the population and lastly (5) utilities and banks – 2.5% of the population (Gesundheit Österreich, 2007).

In 1983, the National Health System (Ethniko Systema Ygeias – ESY, referred to here as the National Health System) was established and it provides, on a universal basis, primary and hospital health care and emergency pre-hospital care (Tountas, Karnaki & Pavi, 2002). In 2006 it was reported that there were 8732 community pharmacies in total in Greece (Gesundheit Österreich, 2007). The licence to practise as a pharmacist is issued by the Central Health Council. Table A11.1 shows the figures that are available for Greece related to the

development of health care resources and utilization. A significant point is the high number of physicians, although all other averages are in the average EU ranges.

## 2. Structure of the primary care system

### 2.1 Primary care governance

The first reference to primary care as a part of the Greek national health system was made in 1983 (Health Act No. 1397). This Act defined health centres as decentralized units of county hospitals.

In 2001 a Health Act was implemented (Tountas, Karnaki & Pavi, 2002) the main aim of which was to improve the quality of care through the creation of regional health systems (RHS) by appointing professional managers in all the health care regions of Greece. Health Act No. 53 (2004) exclusively addressed primary care and defined the services offered.

In 2008, a National Action Plan for Public Health was created by the Ministry of Health and Social Solidarity; this is the first attempt in Greece to include prevention and health promotion in their health care agenda. The objective of the National Action Plan is to promote public health and ensure a national policy which will guarantee the prevention of disease and quality of life of their citizens. The National Action Plan for public health 2008–2012 includes the following priority areas: cancer, HIV/AIDS, reproductive and sexual health, drugs, nutrition and eating disorders, harmful effects of alcohol on health, depression, cardiovascular diseases, environmental risks that threaten health, smoking, motor-vehicle accidents, communicable diseases, travel health, oral health, rare diseases, microbial resistance to antibiotics and infections at health care sites. The National Action Plan provides Greece for the first time with a strong tool to improve the health of the citizens primarily through primary and secondary prevention.

The current situation of primary care in Greece has been analysed to a great extent. A proposal was written by Souliotis and Lionis recommending an integrated system for primary care with the following principles: continuity of care (management of health problems by the same physician), integrated and coordinated care (management of most common diseases and health problems at the patient's local level) and patient-family focused care (appropriate referral and movement through the system)

(Souliotis & Lionis, 2004). In this model, the role of a personal physician is seen as crucial, and a detailed list of services a personal physician should provide to each citizen is clearly set out (Souliotis & Lionis, 2004).

The introduction of clinical governance at the health centre level was accomplished in 2004. The Deputy General Director has instructed the directors of health centres to be accountable for administrative issues and clinical governance (Lionis et al., 2004). Also, the health centre directors play a vital role in patient advocacy, as they issue patient-opinion questionnaires to explore clinical effectiveness (Lionis et al., 2004).

An extensive systematic review has been performed on integrated primary care in Greece (Lionis et al., 2009) and unfortunately the findings were not very satisfactory. It was found that integrated primary care is an issue that requires extensive efforts in Greece. There are many academic institutions, such as the National School of Public Health in Athens and the Department of Social Medicine in Crete in which empirical research is undertaken, but thus far policy-makers are not taking results into close consideration.

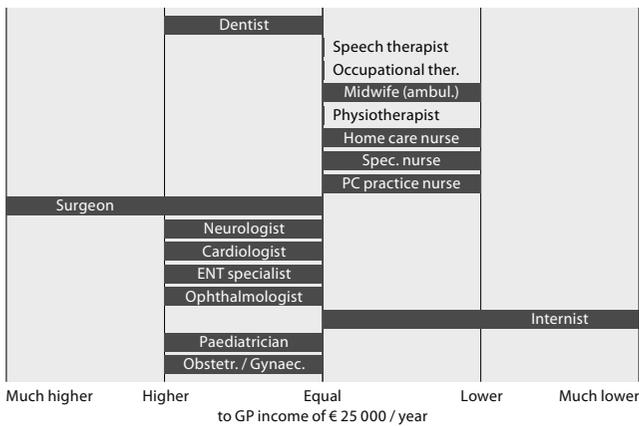
### 2.2 Economic conditions of primary care

In 2000, the proportion of GDP in Greece spent on health care was 9.1% and 42% of this was contributed by private spending. The majority of funding is associated with out-of-pocket payments. It is estimated that €2.45 million (28%) of the total expenditures on health are spent on primary care services by households (Souliotis & Lionis, 2004). A survey in 2007 showed that 43% of the respondents rate general practice care as not very or not at all affordable (European Commission, 2007).

The National Health System in Greece provides free health care for all citizens. Patients pay only some minor fees, for example for medicines or injections prescribed by their GP, a visit to a specialist prescribed by their GP, or a visit of their GPs at the patient's home. It can be called a mixed system since the social insurance funds coexist with the National Health System. Public and private health insurance is available in Greece. The majority of the citizens have public insurance, which entitles them to visit hospitals, private clinics and doctors. Registration with such insurance requires part-time or full-time employment (see section 1 for a list of these social insurance organizations).

There are approximately 220 National Health System health centres that serve primarily semi-urban and rural areas, and roughly 250 Social Security Institution (SSI) polyclinics that serve mostly urban areas. A typical health centre in Greece consists of the following staff: GPs, internists, nurses, lab assistants and other health and administrative personnel. The SSI represents 55% of the insured population. The primary care units of the SSI are staffed with an estimated 7500 doctors of all specialties, 4000 nurses, and other health care personnel (Souliotis & Lionis, 2004). The average annual income of a mid-career GP is €25 000, which is lower than the average income of most medical specialists, but higher than that of nurses (see Fig. A11.1). Nurses generally have a lower annual income than physicians.

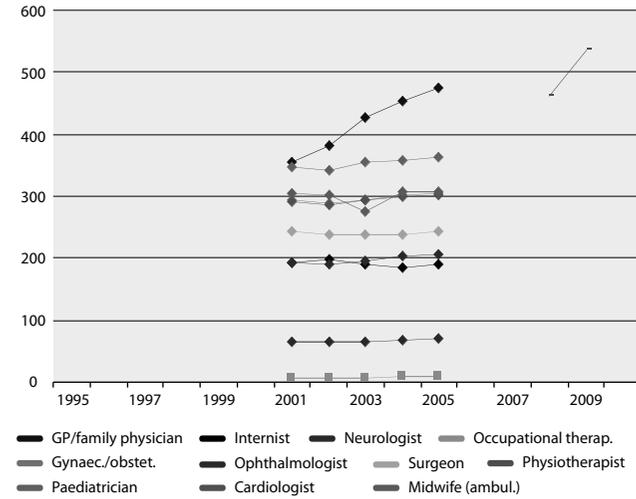
**Fig. A11.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



2.3 Primary care workforce development

The profile of the primary care workforce in Greece is very limited. Statistics are incomplete and therefore Fig. A11.2 is also incomplete due to lack of information. It is known that in Greece there is a general shortage of personnel in the primary care workforce, primarily GPs and nurses (Oikonomidou et al., 2010).

**Fig. A11.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



3. Primary care process

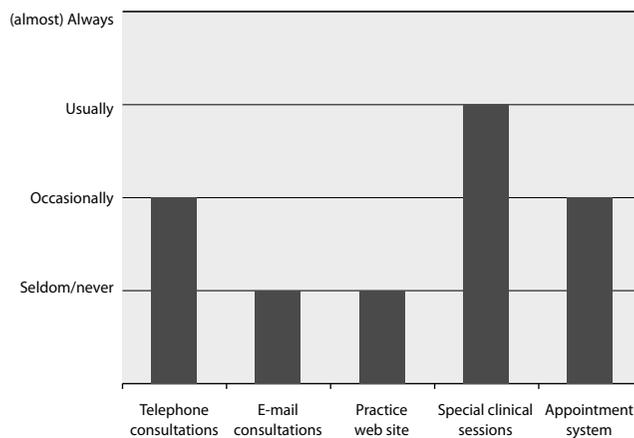
3.1 Access to primary care services

Primary care services are dispersed throughout Greece either in urban areas where Institute of Social Insurance services and solo practice GPs are in operation, or in rural areas where structured primary care services (health centres and satellite practices) are available. There is a strong network of primary care services where easy and inexpensive access is currently available. Shortages of GPs exist in some regions.

A survey in 2007 showed that, overall, only 78% of the respondents find it easy to reach and gain access to GPs (European Commission, 2007). Primary care practices are legally bound to a minimum number of opening hours. Rural and semi-urban primary care centres are open from 8 a.m. to 3 p.m. Although regional differences exist, the most common model for providing primary care after closing hours is that GPs and nurses are responsible for providing after-hours care in their centres.

Primary care centres only occasionally use appointment systems, or offer telephone consultations (see Fig. A11.3). They do usually offer special clinical sessions. Centres rarely provide e-mail consultations or have a practice web site.

**Fig. A11.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



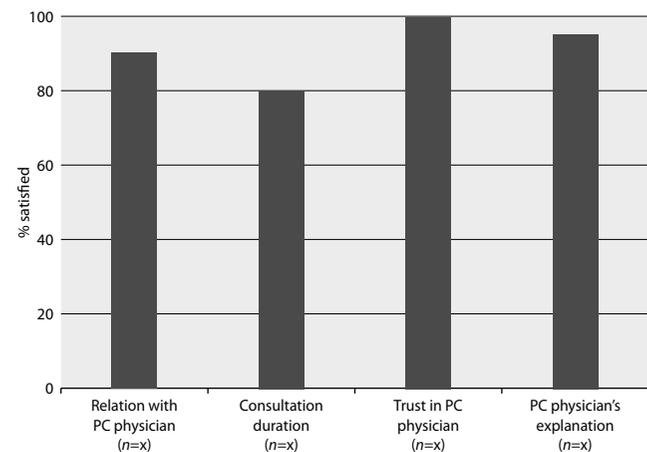
The average working week of GPs is around 50 hours (7 hours per day, 5 days a week plus 7 duty days per month). An average consultation with a GP takes between 10 and 15 minutes, depending on the reason for the encounter. It takes less than 10 minutes when the patient is asking for a prescription and more than 15 minutes for a new health problem. On average, GPs have 26 consultations on an average day (Oikonomidou et al., 2010), which is higher than for non-specialized doctors. The number of home visits is decreasing steadily and varies greatly between health centres and GPs in rural Greece, although it has been noted that the majority of rural GPs perform home visits (Oikonomidou et al., 2010).

The affordability of primary care is an issue of concern in Greece (Oikonomidou et al., 2010).

### 3.2 Continuity of primary care services

Primary care, as seen above, needs radical reform in Greece. Nevertheless, as Fig. A11.4 shows, patients report being highly satisfied with various aspects of care provision.

**Fig. A11.4:** Patient satisfaction with aspects of care provision



In Greece, the prevalence of chronic diseases is rising and this leads to a high demand for and utilization of secondary care and private diagnostic centres, as well as to a high use of medical drugs.

Patients are assigned to a primary care centre in their area, but they are free to register with any GP in that centre. There is no gatekeeping system. The majority of visits are unplanned at the primary care level. As Koutis et al. (1991) found, when comparing a Swedish primary care centre with a Greek primary care centre, more visits were made by appointment at the Swedish primary care centre than in the Greek setting, and this is also the case currently in the majority of primary care centres that serve rural populations in Greece. This seems to impact both continuity of care and quality of management of chronic diseases. Many aspects need to be improved, such as disease management, through the establishment of an electronic patient records system. Efforts to establish clinical governance and quality improvement in primary care units have been attempted in Crete (Lionis et al., 2004), but this reform was discontinued some years after its first implementation.

Keeping medical records either in hard copy or electronically is an ongoing goal in the primary care setting. It has been noted that GPs are more keen to keep medical records than non-specialized doctors (Oikonomidou et al., 2010). The lack of a comprehensive and national electronic patient record (EPR) system seems to contribute to the lack of available data on quality of care and efficiency of services delivery. An EPR system using the International Classification of Primary Care (ICPC-2) system has been developed and is in use in a small number of practices (Kounalakis et al., 2003). The creation of the EPR served as an example, illustrating that

this method is crucial for primary care to increase the overall primary care functioning by improving disease management, increased patient supervision and, above all, quality of care.

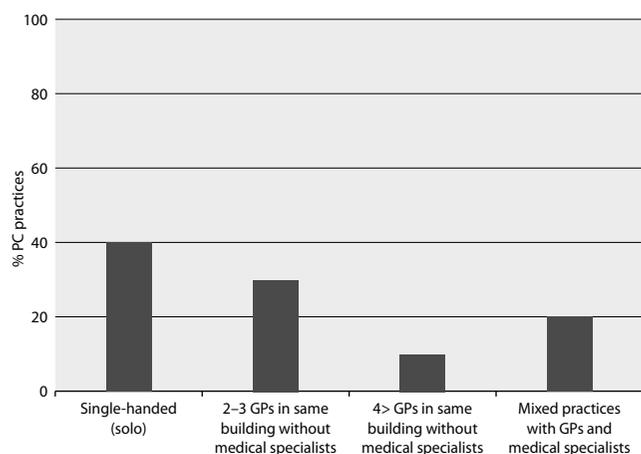
Referral letters are rarely used by GPs when they refer a patient to a medical specialist. The fact that no official information is available on the communication of specialists with GPs after the completion of an episode of treatment is not a good sign. It is only occasionally that primary care practices receive information within 24 hours about contacts that patients have with out-of-hours services.

### 3.3 Coordination of primary care services

A gatekeeping system does not exist in Greece, since the majority of health insurers allow patients to visit any specialist they wish to, without a referral from a GP. GPs in rural areas serve approximately 220 health centres with their satellite practices across Greece. All health centres are affiliated with county hospitals, thus their management is assigned to the administrative and hospital offices. On Crete the coordination of primary care services was assigned to the regional health authorities for only a short period (Lionis et al., 2004).

Forty percent of GPs work alone (see Fig. A11.5). Shared practices, with other GPs and medical specialists, are becoming more and more common. Practices with two or more GPs in the same building account for 40% of GPs and 20% work in centres with a mixture of GPs and medical specialists.

**Fig. A11.5:** Shared practice



As a result of the more frequent occurrence of shared practices, the collaboration of GPs with other primary care professionals seems to be improving. GPs usually have face-to-face meetings with other GPs, practice nurses, midwives, physiotherapists, community pharmacists, social workers, and community mental health workers and there is better awareness of this horizontal collaboration. This is less the case with regard to communication with home care nurses and medical specialists. Coordinated and integrated primary care is nonexistent in contemporary Greece (Lionis et al., 2004).

### 3.4 Comprehensiveness of primary care services

A recent study shows that a limited number of practices have a computer and internet access, and at times practices have shortages of crucial items of equipment such as a spirometer, defibrillator and ECG (Oikonomidou et al., 2010).

First-contact care for common health problems is usually provided by the GP in primary care services, and treatment and follow-up of diagnoses are also dealt with by GPs (see Table A11.2).

Medical technical procedures are completed at the national hospitals due to the lack of advanced equipment in primary care centres. GPs have a major role in preventive care and health promotion for their patients.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

There are no official statistics available on the quality of care provided in primary care.

An Editorial written by C. Lionis (2010) explained the ten steps necessary to improve the quality of services offered by health centres in the short term. In summary, the ten steps describe the necessity to integrate health centres with hospitals and move responsibility for them to the regional administrations along the lines of the reform designed and developed in Crete in the period 2004–2007 (Lionis et al., 2004). Organization and management is a key neglected issue for primary care health centres in Greece. It is necessary to put in place quality indicators for monitoring effectiveness and efficiency to improve the overall quality and efficiency of services. It is also imperative to provide a guidance

**Table A11.2:** GPs' involvement in delivery of various primary care services\*

<b>GPs' estimated involvement in the provision of:</b>	<b>GPs are "always" involved in the provision of care regarding:</b>	<b>GPs are "seldom or never" involved in the provision of care regarding:</b>
First-contact care (from a list of 10 items)	–	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Man aged 28 with a first convulsion</li> <li>• Man with suicidal inclinations</li> </ul>
<i>Treatment and follow-up of diseases</i> (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Uncomplicated diabetes type II</li> </ul>	<ul style="list-style-type: none"> <li>• Cancer (in need for palliative care)</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from the cornea</li> <li>• Fundoscopy</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Allergy infections</li> <li>• Testing for sexually transmitted diseases</li> <li>• Cervical cancer screening</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Groupwise health education</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

document with the latest guidelines for the most common diseases and health problems to the health centres. One way of improving organization is the development of an electronic file for recording minimum morbidity data. In addition, each health centre should have a separate budget in each regional administration in order to have the capability to purchase selected diagnostic equipment suitable for the health centre.

#### 4.2 Efficiency of primary care

As Freund et al. (2010) state, case management is a crucial component of evidence-based primary care for patients and if carried out correctly it increases efficiency. This concept of case management, if managed and implemented properly, can improve the management of chronic illness and meet patients' self-management needs, and allow better implementation of evidence-based recommendations for diagnostic procedures, lifestyle counselling for patients and the monitoring of patients. Many studies are currently being undertaken in Greece

to create guidelines for various diseases and illnesses to be used at the primary care level so that all care services can be implemented uniformly in primary care.

Various methods have been utilized in Greece to measure and evaluate efficiency and one of these is Data Envelopment Analysis (DEA). The Institute of Social Insurance assessed 133 primary health centres to evaluate the level of efficiency in primary health centres. The results indicated that centres that had the capability to perform laboratory and radiographic examinations had higher efficiency scores and the most efficient were the centres serving a population of 10 000–50 000 (Zavras et al., 2002). A research project to assess the efficiency of primary care services serving rural areas of Greece has been implemented and qualitative and quantitative research methods have been used. Preliminary results from two Greek regions of Greece (Epirus and Crete) have been announced. The initial findings of this research project showed GPs' opinion as to the main issues that affect efficiency in primary care: they underlined the lack of primary care staff to cover actual demand in both geographical areas, and insufficient

economic resources. The respondents also stated that biomedical equipment is commonly underused due to the lack of trained personnel and often the equipment is out of order, and, finally, there were opposing views on free market initiatives within primary care service delivery, with most of the informants sceptical and with negative opinions regarding the privatization of health services.

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# 12 Hungary

*S. Wilm, P. Vajer, I. Rurik*

## 1. The context of primary care

### Country and population

Hungary, located in the heart of central Europe, is a country of 10 million inhabitants (estimation 2010) (Hungarian Central Statistical Office, 2010). The total area is 93 030 km<sup>2</sup> with a population density of 107.7/km<sup>2</sup>. For 95% of the population, the mother language is Hungarian, a Finno-Ugric language unrelated to any neighbouring language. The main minority groups are Roma (2.1–3.0%) and Germans (1.2%) (Wikipedia, 2010). The number of elderly people above 64 years had increased to 15% of inhabitants by 2002, and the share of young people below 15 had decreased to 16% (Gaál, 2004).

### Development and economy

Founded in 895, Hungary now is a multi-party democracy as a parliamentary republic, headed by a President, with the current third republic in place since October 1989. It is administratively divided into 7 regions, 19 counties and 173 sub-regions, with the capital and largest city Budapest as an additional independent area. Hungary joined the EU in 2004 and it has a social market economy. The 2009 estimate for GDP was PPP\$ 18 566 per capita (Hungarian Central Statistical Office, 2010) with a decline compared to 2008. The unemployment rate increased from 5.8% in 2002 to 7.2 % in 2005 (Rurik & Kalabay, 2009).

**Table A12.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Hungary	EU <sup>1</sup>	Hungary	EU <sup>1</sup>	Hungary	EU <sup>1</sup>	Hungary	EU <sup>1</sup>	Hungary	EU
1995	7.3	7.6	658	1275.9	877.8	740.9	300.4	292.7	n.a.	27.5 <sup>6</sup>
2000	7.0	7.9	853	1608.0	809.6	669.0	268.2	295.1	n.a.	28.3 <sup>5</sup>
2005	8.3	8.5	1411	2150.9	785.4	604.6	278.1	316.0	n.a.	26.3 <sup>4</sup>
2009	7.3 <sup>7</sup>	8.8	1437 <sup>7</sup>	2788.2	704.5 <sup>7</sup>	564.8	309.1 <sup>7</sup>	321.6	n.a.	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Hungary	EU <sup>2</sup>	Hungary	EU <sup>1</sup>	Hungary	EU <sup>1</sup>	Hungary	EU <sup>1</sup>
1995	535.1	575.1	10.8	12.5	20.4	15.7	10.4	6.6
2000	527.7	655.9	8.9	10.3	21.8	17.7	11.1	6.8
2005	594.7	682.7	8.8	9.5	23.2	16.2	12.9	6.8
2009	615.5 <sup>7</sup>	745.5	10.5 <sup>7</sup>	8.8	17.9 <sup>7</sup>	15.6	12.0	6.9

Sources: EU and Hungary average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008.

## Population's health

Overall life expectancy at birth increased from 69.1 in 1980 to 73.0 years in 2005 (Rurik & Kalabay, 2009). By 2002, life expectancy for men was 68.4 while for women it was 76.6 years (Gaál, 2004). Cardiovascular diseases account for half of all causes of death, while the second most common cause is neoplasm, representing about a quarter of all deaths. These are followed by diseases of the digestive system and deaths from external causes. All leading causes of death have shown a decreasing trend since the mid 1990s (Gaál, 2004).

## Characteristics of the health care system

The change from the communist system initiated a large-scale reform of the health sector at the end of the 1980s and led to the reintroduction of social health insurance structures. Since then, the predominant trends of reform have been decentralization and cost containment. The responsibility for service provision has been passed to local government, along with the ownership of most health care facilities (Gaál, 2004). In 2007, a health reform was planned and initialized, forced through by the coalition parties that were in power at that time, but poorly communicated to the population and professionals. The reform included the introduction of a co-payment and the replacement of the single government-run health

insurance fund by regional insurance companies, with partially private ownership and contributions. But in a nationwide referendum the people voted against these reforms. Co-payment was abolished in April 2008 and private health insurance funds were not established (Rurik, 2009).

The total governmental health expenditure in the state budget of 2010 is €2755 million.

Participation in the statutory health insurance scheme is compulsory for all citizens.

Table A12.1 shows that Hungary has a higher proportion of hospital beds, hospital acute care admissions, average length of stay in hospitals, and outpatient contacts per person than the EU average. Hungary spends less than the EU average on health care.

## 2. Structure of the primary care system

### 2.1 Primary care governance

In Hungary, there are no policy documents that reflect a clear vision on current and future primary care, nor

is there an explicit governmental policy to regulate the distribution of primary care providers and facilities more evenly.

Since 1990 there has been no primary care department within the Ministry of Health. After the recent election, a new governmental structure was formed in May 2010. The ministries of health, education, labour and social affairs were merged into a huge Ministry of National Resources. Health affairs are now coordinated by a Secretary of this Ministry. The primary care budget is established within the national health care fund. It is determined in the national yearly budget which is divided by sector (primary care, secondary care, hospitals, emergency services, etc.).

There is only partial involvement in and symbolic contribution of stakeholders to primary care development. For example, there is an advisory board to which family physicians are elected in a regulated way (they represent universities, scientific committees and other groups); some of the members are nominated by the Minister. The Minister is not obliged to ask the opinion of this body, but mostly he or she does.

Community influence on the provision of primary care services has not been organized on a national or regional level. Health services are inspected by the office of the Chief Health Officer. This body has regional and city branches, but no specific unit for primary care.

There are some obligatory professional requirements for physicians to practise in primary care. The statute says that those who may work as a family physician must either be specialists in family medicine (three years' training, since 1999), or have their specialization in internal medicine and have worked continuously as a GP before this statute was created (2000), or have been working in primary care for 25 years prior to 1999, or be completing their specialization period in family medicine. Those physicians who have no specialization and are not trainees can work in areas where there is no family doctor for a longer period; in this case continuous supervision is given (Ministry of Health, 2000). There is also retraining of other clinical specialists (since 1987, modified in 2009).

There are several formal infrastructural requirements for primary care practices to operate and some personal conditions; qualifications are regulated by law (Ministry

of Health, 2003). Patient rights are laid down in the Act for the Health System (Act No. 154/1997). It is valid for all health care providers.

## 2.2 Economic conditions of primary care

The total expenditure on primary care amounts to 10.3% of the total expenditure on health in the state budget of 2010. Prevention is an obligatory task in general practice, but it is not paid for separately – it is included in the per capita payment. The total expenditure on prevention and public health, as a percentage of the total expenditure on health in 2010, was 2.4%.

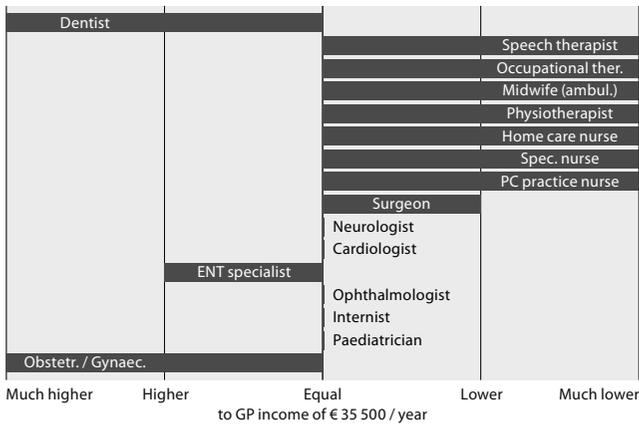
All of the population is fully insured for primary care costs and for costs of general practice services (including consultations at the GPs' practice and at home); there is no co-payment. Also, the whole population is insured for medicines prescribed in primary care, but there is a high co-payment for medication (50–75%). There are some chronic illnesses and conditions for which patients get medication for free, and there is an opportunity for socially and economically deprived people to get free medication to a limited extent.

Around 90–95% of GPs are self-employed, with a contract to the national health insurance fund regulated by the government, and 5–10% are salaried by national, regional or local authorities. Salaried GPs are paid a flat salary, following the (very low) official salary table of civil servants. There is an existing tipping system in the Hungarian health system, consisting of out-of-pocket-money given by the patients, but this represents a bigger amount of income for doctors in the specialist and hospital sector than in the primary care sector. The remuneration of self-employed GPs comes from a mixture of sources but is mainly based on capitation. There is a limitation on the capitation fee above a certain number of patients. There are other components in the calculation, such as number of patients in the practice, location of the service/practice, age of patients, other qualifications of the physician, etc. Services in primary care paid for on a fee-for-service basis are very limited.

The (estimated) gross annual income of a “mid-career” GP (about 10 years' experience and with an average size of practice) in 2010 amounts to €35 500 for self-employed GPs. This income should cover all expenses for running a practice: premises, equipment, care, salaries for staff employed, etc. It is equal to the income

of some specialists, but lower or much lower compared to others (see Fig. A12.1). Many GPs work part time as occupational health physicians (Rurik, 2009).

**Fig. A12.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

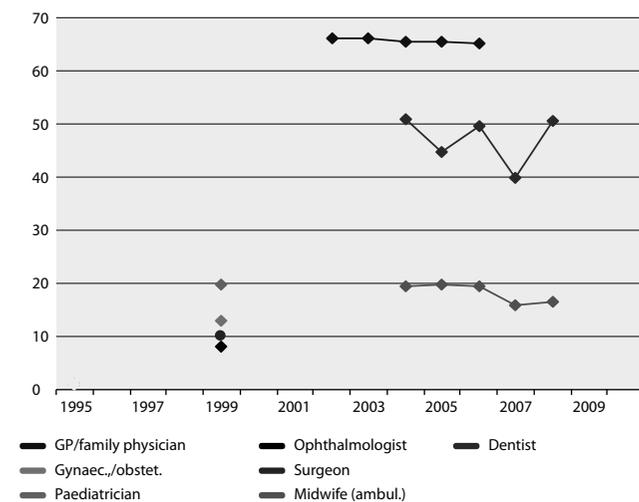
The core of the primary care workforce in Hungary (about 6500 physicians) is self-employed GPs and paediatricians, with one contract with the governmental health insurance fund for financing and one contract with the local municipality to supply care (Rurik, 2009). Specialists who can be seen without a referral include gynaecologists, paediatricians, ophthalmologists, ENT specialists, surgeons, dermatologists and dentists. People also have direct access to primary care nurses and ambulatory midwives. GPs, primary care nurses, home care nurses and ambulatory midwives exclusively work in primary care.

Fig. A12.2 shows there is a decline in supply of primary care providers over the years (Eurostat, 2010). The average age of GPs is 55–57 years (estimation 2010), and 48% of them are aged more than 55 years. The range of working hours per week of GPs is between 20 and 50 hours (including hours for keeping up to date and for administration, and excluding hours on call, as well as being dependent on practice size and personal ambitions). Tasks and duties of GPs have been described in a policy document in 2000 (Ministry of Health, 2000). One-tenth of all medical graduates chose to enrol in postgraduate training in family medicine in 2009. There are no data available from studies on primary care workforce capacity needs and development in the future for Hungary.

Postgraduate training in family medicine was made compulsory by a regulation in 1992, which came into force from 1999 (Rurik et al., 2008). All four Hungarian medical universities have departments of family medicine and a postgraduate programme in family medicine. Specialist training in family medicine takes 36 months, and trainees spend 14 months in primary care. Nearly 94% of all practising GPs have taken the board specification examination for family medicine (Rurik et al., 2008). Professional training specifically for community nurses and primary care nurses takes 24 months.

There are several professional associations of GPs in Hungary focusing on education and research (e.g. the Hungarian Academy of Teaching Family Physicians, the Association of Researchers in Family Medicine, the Scientific Association of General Practitioners), but there are no associations for primary care nurses.

**Fig. A12.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



## 3. Primary care process

### 3.1 Access to primary care services

The geographic availability of primary care services in Hungary is uneven. For GPs, there is a difference of up to 20% between the average urban density of GPs (per 100 000 population) and the average rural density of GPs. There is a shortage of GPs in some regions. The norm is that every citizen should have his/her GP; practically, this means that there should be a GP in the village/area, or,

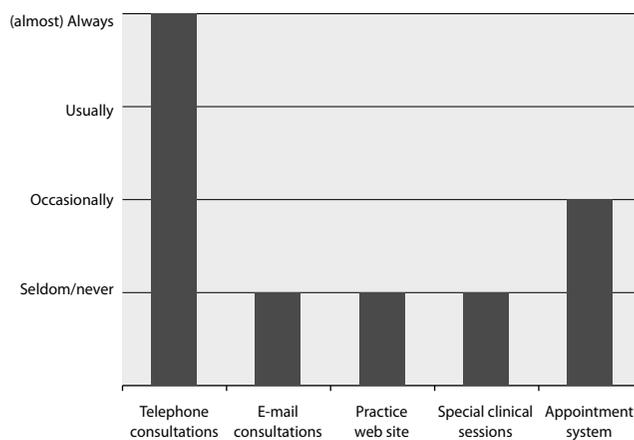
if the population is too small, in the next nearest village. There is a shortage of approximately 150 GP countrywide, mostly in small villages.

General practices are obliged to have a minimum number of three (2–4) opening hours/day. The average number of home visits per week per GP is 6.4 (Hungarian Central Statistical Office, 2010); the number may reach 50/week depending on region, population, doctor's habit and transport facilities. Recently the provision of after-hours primary care has usually been outsourced to deputizing services.

Internet-based organizational arrangements seldom exist in general practices (see Fig. A12.3).

An estimated 95% of patients (2010) find it easy to reach and gain access to GPs.

**Fig. A12.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



### 3.2 Continuity of primary care services

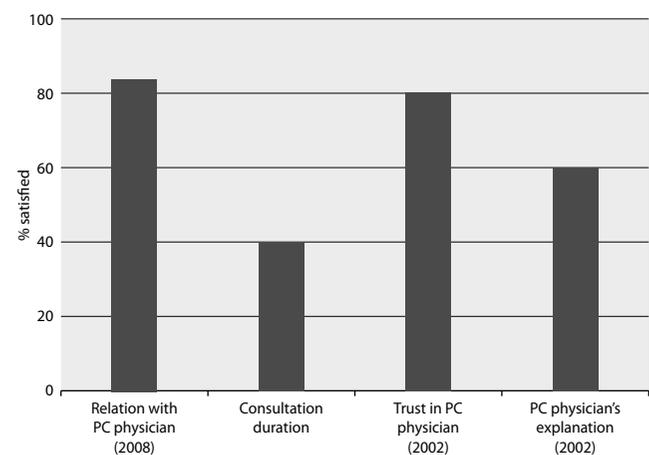
In Hungary there is a patient list system for GPs. The average population size per GP is 1530 (1100–2200 patients). Patients can freely choose the GP they want to register with; usually they prefer to visit the closest centres or general practices. An estimated 90% of patients report visiting their usual primary care provider for their common health problems.

Almost all GPs have a computer at their disposal in their office, mainly used for the prescription of medicines and for keeping patients' records. Usually GPs use referral letters when they refer to a medical specialist. Consultations are often symbolic or for administrative

reasons, as specialists are authorized to prescribe some drugs with higher insurance reimbursement (lower patients' contribution). This is often a reason why patients are referred by GPs. Patients usually inform their GP about visiting the specialists. The specialists often give a letter authorizing the GP to prescribe medication with higher insurance contribution.

Patients are mainly satisfied with their GP (see Fig. A12.4), but rarely with specialists and very rarely with hospitals. The situation has worsened in recent years.

**Fig. A12.4:** Patient satisfaction with aspects of care provision



### 3.3 Coordination of primary care services

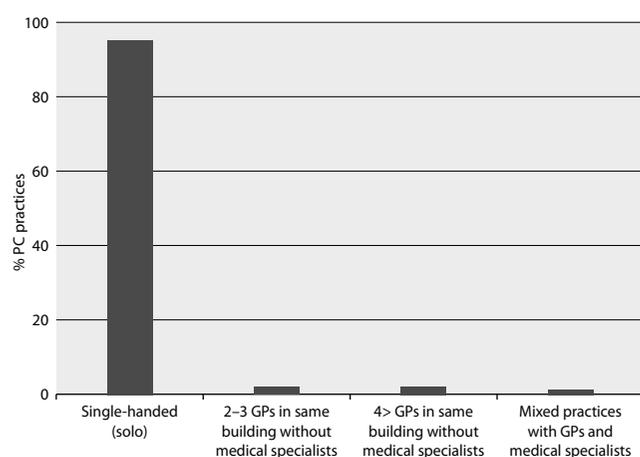
In practice, there is no gatekeeping system in Hungary. Besides access to GPs, patients have direct access to gynaecologists, paediatricians, ophthalmologists, ENT specialists, surgeons, dentists, primary care nurses and ambulatory midwives. For other specialists, a referral is normally required. Private specialists see patients by direct access without referral, but the costs are not reimbursed by the health insurance fund.

The primary care system in Hungary is based on single-handed practices (see Fig. A12.5). Each GP has a licence to work, and almost all of them work by themselves from the financial point of view. In cities it is typical that a few GPs work in the same building, but the patient lists are not mixed. In effect GPs work individually – only physically are they in the same building. Very few real group practices exist in the country. It is uncommon for medical specialists to visit a primary care practice to provide replaced specialist care or joint care with a GP (joint consultations).

GPs have regular face-to-face meetings only with other GPs, their practice nurses and home care nurses; otherwise cooperation with other primary care professionals (e.g. social workers, physiotherapists) or specialists exists only occasionally. Nurse-led care is rare.

Clinical patient records from general practice are seldom used at regional or local level to identify health needs or priorities for health policy. If at all, community health surveys are conducted only incidentally at local or regional level to improve the quality and responsiveness of primary care.

**Fig. A12.5:** Shared practice



### 3.4 Comprehensiveness of primary care services

An estimated 80% (2010) of all patient contacts are handled solely by GPs without referrals to other providers. GPs' involvement in delivery of various primary care services in Hungary is shown in Table A12.2. GPs offer a large range of services, including preventive care as well as diagnosis, treatment and follow-up for chronic conditions, but as there is no gatekeeping system, there are some other specialties these patients may also address for first contact (see section 3.3). Many medical technical procedures are left to other specialties.

Paediatricians or their practice nurses are always involved in all common infant vaccinations. Primary antenatal care and paediatric surveillance is done by a separate network of paediatricians.

GPs are rarely or never involved in groupwise health education of their patients on topics like healthy diet; physical activity; smoking; use of alcohol, etc. This form

of health education is very rare in Hungary. It is, however, offered by diabetologists or specialized diabetes nurses in diabetes centres.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

Several indicators for quality as an outcome of a primary care system have been identified by the PHAMEU project, but for most of them there are no valid data from Hungary.

The average number of prescriptions annually provided by GPs per 1000 contacts and/or per 1000 registered patients in 2009 was 13 200. However, 58% of this is prescribed according to other specialists' advice. The use of antimicrobials for systemic use expressed in DDD/1000 inhabitants/day in 2007 in ambulatory care was 15.46.

The crude percentage of diabetic population aged over 25 years with HbA1C greater than 7.0% was 49.4% in 2008.

The vaccination coverage of infants within primary care for all common vaccinations (see section 3.4) as an indicator for the quality of maternal and child health care is almost 100%. Rubella, measles and mumps are vaccinated together at 15 months of age (99.8% coverage). Revaccination is at the age of 11 years (98.3% coverage).

Hepatitis B is vaccinated at the same ages. Of the population aged 65+, 38% have been vaccinated against flu in 2008 (OECD 2010). The population aged 65+ gets this vaccination free of charge.

There are no data available for the number of hospital admissions per 100 000 population with a primary care sensitive diagnosis such as dehydration, kidney infection and asthma.

### 4.2 Efficiency of primary care

Home visits make up about 10% of all general practice-patient contacts in Hungary (2003) (see also section 3.1). Data on the percentage of telephone consultations are not available.

**Table A12.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> </ul>	<ul style="list-style-type: none"> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Man with suicidal inclinations</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Peptic ulcer</li> <li>• Congestive heart failure</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Cancer (in need for palliative care)</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Wedge resection of ingrown toenail</li> <li>• Removal of sebaceous cyst from hairy scalp</li> <li>• Wound suturing</li> <li>• Excision of warts</li> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from the cornea</li> <li>• Fundoscopy</li> <li>• Joint injection</li> <li>• Strapping an ankle</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Allergy vaccinations</li> <li>• Testing for sexually transmitted diseases</li> <li>• Screening for HIV/AIDS</li> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> </ul>
Health promotion (from a list of 4 items)	–	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

The average consultation length of GPs in 2003 was 6 minutes. The number of GP consultations per capita per year in 2003 summed up to 6.5. Compared to other European countries, Hungarian patients see their GP more often, but for shorter consultations. In 2003 there were 990 new referrals from GPs to medical specialists per 1000 listed patients per year but, as outlined in 3.3, an estimated 80% (2010) of all patient contacts are handled solely by GPs without referrals to other providers.

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# 13 Iceland

*A. Hutchinson*

## 1. The context of primary care

### Country and population

Iceland is one of the smallest European countries with a population of about 320 000 and the lowest population density in Europe. There have recently been some fluctuations in population size because of the arrival of new immigrants, many being economic migrants. There are only two urban areas in the country and a significant proportion of the population (about one-quarter) live in isolated communities.

### Development and economy

Compared to most other European countries, the GDP was on a high and rising trend until 2007, with 9.3% of GDP being spent on health care (PPP\$ 3319 in 2007, one of the highest levels among OECD countries) (see Table A13.1). However, recent economic circumstances have curtailed this growth. For a number of years there has been a high level of employment (97% until 2008) (OECD, 2009) and around 20% of people aged over 65 years are in employment. Thus the old-age dependency ratio is among the lowest in Europe (17.6). Iceland ranked 17th on the Human Development Index with 0.869 (UNDP, 2010).

**Table A13.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Iceland	EU <sup>1</sup>	Iceland	EU <sup>1</sup>	Iceland	EU <sup>1</sup>	Iceland	EU <sup>1</sup>	Iceland	EU
1995	8.2	7.6	1905	1275.9	9.0	740.9	302.7	292.7	n.a.	27.5 <sup>6</sup>
2000	9.5	7.9	2704	1608.0	7.8	669.0	344.3	295.1	17.7	28.3 <sup>5</sup>
2005	9.4	8.5	3304	2150.9	6.8	604.6	373.1	316.0	16.3	26.3 <sup>4</sup>
2009	9.6	8.8	3378	2788.2	n.a.	564.8	n.a.	321.6	15.7 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Iceland	EU <sup>2</sup>	Iceland	EU <sup>1</sup>	Iceland	EU <sup>1</sup>	Iceland	EU <sup>1</sup>
1995	602.1 <sup>8</sup>	575.1	13.7	12.5	18.1	15.7	6.1	6.6
2000	603.9 <sup>9</sup>	655.9	6.1	10.3	17.1	17.7	5.2	6.8
2005	n.a.	682.7	5.4	9.5	16.5	16.2	4.4	6.8
2009	n.a.	745.5	n.a.	8.8	n.a.	15.6	n.a.	6.9

Sources: EU and IS average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year 2008. <sup>8</sup> Year 1996. <sup>9</sup> Year 1999.

### Demographic situation

The country currently (in 2010) has a high proportion of young people, with only 12% of the population over the age of 65 and around 3.5% aged over 80 years. The fertility rate is high for a European country (1.9). It is expected that the population structure will change significantly by the year 2030 when 5.5% are expected to be aged over 80. Although only about 12% of the population are currently aged over 65 years, this proportion is expected to rise to 27% by the year 2050.

Life expectancy is among the highest in the world, with female life expectancy at birth in 2006 being 82.9 years and male life expectancy being 79.5 years. Female healthy life expectancy aged 65 in 2006 was 12.8 years while that of males was 13.6 years.

### Key characteristics of the health services

Health services are funded through general taxation and services are provided through two routes – either via the Ministry of Health to health centres and their staff, and to hospitals, or through funds transferred to municipalities (local authorities), which run social services and, for a large sector of the population, home nursing services (Halldorsson, 2003; Suppanz, 2008).

Primary health care services are mainly state funded with co-payment by most adults. Services are provided through health centres by multidisciplinary teams that are employed on a salary by the state. In addition, around 30 GPs operate in private practice and provide state-funded services on a fee-for-service basis. Populations served by each health centre vary, with some centres serving populations in remote areas of the country. Very few consultations take place outside of the health centres, with GPs now undertaking an average of one home visit per week.

## 2. Structure of the primary care system

### 2.1 Primary care governance

There is no primary care division in the Ministry of Health but there is a policy group that advises the Minister and other senior aides.

There is no explicit policy document on the government's current or future vision on primary care, nor on achieving an equitable distribution of services. However, the process of development of health centres since the early 1990s, following from the Health Care Act 1974, and the implementation of the national 10-year health care

plan (Ministry of Health and Social Security, 2004), has meant that there is a reasonable distribution of primary care facilities, even in the more remote settings.

The primary care governance system is slowly decentralizing. Budgets are established at a national level, although there has been a recent move to manage primary care across the seven regions. The management of health centres has been decentralized to regional levels. For instance, regions are encouraged to develop support networks of health centres in rural and isolated communities to improve out-of-hours care services. Additionally, some management systems and budgets for community and home nursing are being distributed to individual municipalities, the largest being in Reykjavik, rather than being managed directly by the Ministry of Health.

There is some contribution to policy development by professional organizations. The Nursing Association tends to be mainly engaged with terms and conditions of services. The Icelandic Medical Association appears to have had a stronger voice and has been the prime mover in developing a primary care system that does not have a “gatekeeping” function, where people may refer themselves directly to specialists.

Older people have a special right to be consulted on health services, including primary care, under the Act on the Affairs of the Elderly, which established a special service council for the elderly in each health centre district. The service councils are, among other things, responsible for monitoring the health of the elderly population and for seeking to ensure that elderly people receive the services they need (Halldorsson, 2003).

There is no specific quality management structure for primary care. Complaints are dealt with by the health centre senior physician or nurse, or by the Medical Director for Iceland. There are no systematic surveys of effectiveness or patient satisfaction. Patient rights, including informed consent and confidential use of medical records, are protected by law.

## 2.2 Economic conditions of primary care

General medical services accounted for 9.55% of total public health expenditure on health in 2008. The expenditure on public health is 0.68% of the total health expenditures. Health care coverage is universal but co-payments are made for primary care health services,

including primary care consultations for adults, thus increasing the overall public expenditure on primary health care (Statistics Iceland, 2010).

Most GPs (about 185 in total) are salaried, employed on a contract by the Ministry of Health. Around 30 other GPs work on a combination of private fees and fee-for-service paid by the state (NOMESCO, 2008). GPs may choose to have a fixed salary or 80% fixed salary and additional fee-for-service payments. Most other staff who work in health centres – nurses and allied health professions – are paid on a contract by the Ministry of Health. There is no “gatekeeping” function for primary care and many specialists offer a private practice service without referral, thus increasing the access of patients to a primary physician, though at cost to the patient.

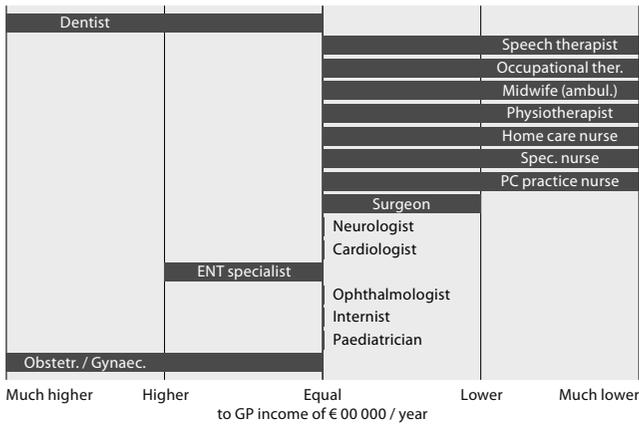
It is estimated that the annual income of a “mid-career” GP is around €70 000. Basic salaries for GPs and specialists are approximately equal, but higher compared to the income of allied health care professionals. However, both GPs and specialists earn additional fees for additional duties and many specialists also have significant private practice earnings, which may alter the parity ratio.

## 2.3 Primary care workforce development

Fig A13.1 shows the five-year development in supply of primary care professionals. The most accurate data are held for GPs, among the wider primary care/first-contact care group of professionals. There are about 220 GPs in Iceland. There is no system of primary care workforce capacity investigation in place.

Around 77% of the general practice workforce is aged 45 years and over, and about 32% is aged 55 years and over (note that the national retirement age is currently 67 years). GPs work on average 40–45 hours per week. Their tasks and responsibilities have not been formalized in a law or policy document.

**Fig. A13.1:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Notes: All specialists may provide first-contact care. The data do not differentiate for those who do and those who do not provide this service. Furthermore, there is no indication of the proportion of the time spent by other staff groups working in the ambulatory sector.

GPs have a similar status to specialists in that they have a salaried position, although they make up only about a fifth of the medical workforce. Iceland has only one university and it has a medical undergraduate course, and, since 1990, a linked postgraduate course in family medicine. Most medical students are said to wish to become specialists and there are only 3–4 general practice training posts per year out of a graduate class of 40 per annum (though some go on to train in family medicine in other Nordic countries or North America).

There is no separate medical association for GPs, nor is there one for primary care nurses in Iceland. The Icelandic Medical Association speaks for all of the medical specialties. With the absence of an Icelandic journal on primary care, the academic community tend to seek publication in the *Scandinavian Journal of Primary Care*.

### 3. Primary care process

#### 3.1 Access to primary care services

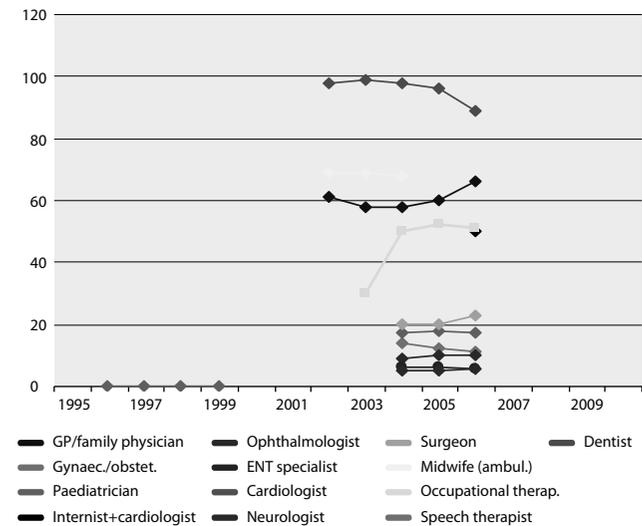
Primary care services are available to all residents through the health centre network and through private practitioners or specialists working independently from their own offices. In general there is a good spread of facilities across the country although, because of the isolated nature of some communities, some patients may still have long travel distances, or experience a lack of availability of medicines due to a shortage of pharmacies.

Although there are currently no shortages of GPs, there is concern for future recruitment when the current cohort of GPs retires.

Primary care health centres are funded by the Ministry of Health and have a standard opening time from 0800 to 1700 hrs, Monday to Friday, and 0900 to 1200 on Saturday. GPs may agree to undertake out-of-hours work between 1600 hrs and 2000 hrs on weekdays, receiving ISK 100 000 (about €530) per session. Many GPs also undertake out-of-hours work through a cooperative, working between 1700 hrs and 0800 hrs.

Web site availability of primary care health centres is high and telephone consultation is the norm, although there is still a relatively low level of e-mail consultation (see Fig. A13.2).

**Fig. A13.2:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Notes: All specialists may provide first-contact care. The data do not differentiate for those who do and those who do not provide this service. Furthermore, there is no indication of the proportion of the time spent by other staff groups working in the ambulatory sector.

Cost-sharing is common in the Icelandic health system and there are costs for consultations in primary care. The cost of a consultation for an adult is approximately €5, €11 for out-of-hours care in the health centre, €12 for a home visit and €16 for an out-of-hours home visit (2006 prices). Preventive health care consultations for pregnant women and those for women with infants are free, as is school health care. Pensioners pay half price and young people under 18 have free services (NOMESCO, 2008). There are no data on the response of users to these charges, nor are there data on satisfaction with these services.

**Table A13.2:** GPs' involvement in delivery of various primary care services\*

<b>GPs' estimated involvement in the provision of:</b>	<b>GPs are "always" involved in the provision of care regarding:</b>	<b>GPs are "seldom or never" involved in the provision of care regarding:</b>
First-contact care (from a list of 10 items)	–	• Women with a breast lump or irregular menstruation, although they may be involved in a first consultation
<i>Treatment and follow-up of diseases</i> (from a list of 9 items)	–	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	• Fundoscopy • Strapping an ankle	• Wedge resection of ingrown toenail • Removal of sebaceous cyst • Excision of warts • Intravenous infusion
Preventive care (from a list of 8 items)	• Infant immunization	• Immunization for tetanus • Influenza vaccination for high-risk groups • Breast cancer screening
Health promotion (from a list of 4 items)	–	–

Note:

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

### 3.2 Continuity of primary care services

Patients register with a health centre and can choose a doctor. They can also attend any other health centre in the country to access care and many choose to do so if they work at a distance from their local centre. This is facilitated by access to the first level of their patient record information at all health centres. The average population size served by GPs in urban areas is 1700, and in rural areas 1400 patients.

All health centres use the Department of Health electronic patient record system and other members of the primary health care teams also have access to (large sections of) the system. The electronic patient record system is used for various purposes, including financial administration, prescription of medicines, medical record keeping, monitoring certain patient groups by diagnosis or health risks, and expert information searches on the internet. It is however not commonly used for communicating patient information to specialists, or sending prescriptions to pharmacists (Dobrev et al., 2008).

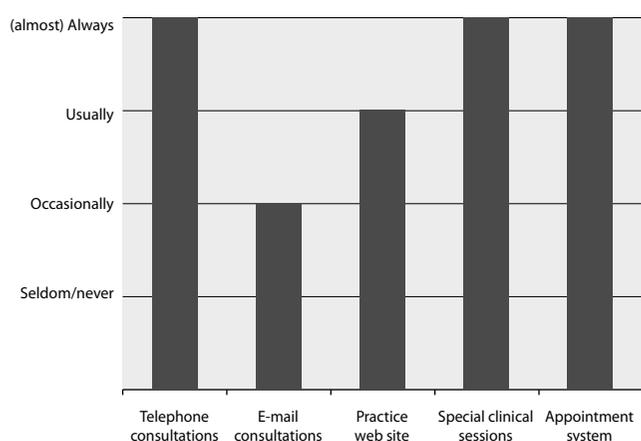
GPs usually use referral letters when they refer a patient to a medical specialist. However, referral by GPs is only one of the common patient routes to specialist practice since there is no "gatekeeping" function in primary care in Iceland. Many patients self-refer, sometimes resulting in problems with information flow back to the

GP. Information flows between primary and secondary care are said to be reasonably prompt but there is less systematic return of information from private secondary care consultations.

### 3.3 Coordination of primary care services

A gatekeeping system does not exist and people can access private secondary care without a referral, essentially consulting in an office-based specialist practice system of primary care. Some specialists, such as cardiologists, require patients to have a referral letter from their family doctor before being seen. Nevertheless, it is estimated that about 85% of people attend their own health centre doctor for a first consultation about a problem.

GPs tend to work in groups, other than those in very rural settings who now work in dispersed teams, linked in a "federal" structure (see Fig. A13.3).

**Fig. A13.3:** Shared practice

As a result of this open access system, the skill-mix of primary care providers is very broad. In the health centres, the core teams include GPs, nurses and school nurses, specialized children's nurses who are concerned with preventive activities, physiotherapists and occupational therapists. These teams are supported by an administrative team. There is relatively limited collaboration between primary and secondary care and no integration of public health services (other than preventive health activities). As indicated above, office-based specialists in the whole range of specialties provide primary health care services.

In the main urban area of the country there has recently been a move to separate out the home nursing service (that is, those nurses who carry out home visits on a 24-hour basis, and who are different from those who are mainly based in health centres) from the health centre service. Thus the home nursing service is now run by the municipalities rather than the Ministry of Health. As a result, the previously integrated primary care service in the urban area appears to have suffered some dislocation in coordination and communication.

### 3.4 Comprehensiveness of primary care services

Facilities in the health centres are of a high standard and centres are well equipped with modern diagnostic equipment. Most centres have well-equipped treatment rooms for nursing procedures and minor medical procedures. There are usually facilities for physical therapies and rehabilitation, and for child health clinics. Nevertheless, although the centres are well equipped, only a limited number of medical technical procedures are undertaken (see Table A13.2).

Common health problems tend to be presented first to doctors and nurses in health centres but a significant proportion of first-contact care is presented to specialists in private office practice. For some chronic diseases, office-based specialists sometimes provide both initial management and follow-up, rather than return patients back for follow-up care by the GP. Health promotion is usually undertaken as part of condition-specific consultations.

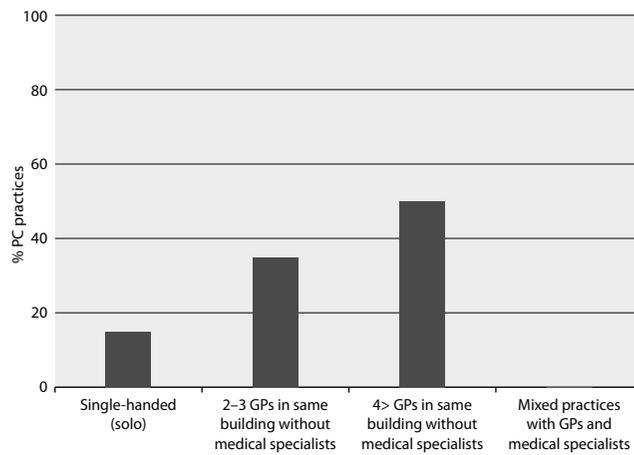
Preventive care, such as infant immunization programmes, is usually provided by health centre staff, although cervical screening and breast screening programmes are undertaken elsewhere. Maternal and reproductive care may be provided either by health centre staff or by office-based specialists, while child care is often provided by nursing teams in the health centres.

## 4. Outcome of the primary care system

Data from the Icelandic Prescription database indicates an annual prescribing rate of around 3450/1000 registered patients. At around 3.5 prescriptions per patient per year this might be regarded as quite a low rate and may reflect the fact that, although prescribing is also undertaken by office-based specialists in private practice, these activities are not recorded in the prescribing data. Total sales of medicinal products in Iceland are generally similar to those of Norway (NOMESCO, 2008).

Annual admission rates to hospital for primary care sensitive conditions are shown in Fig. A13.4. Data on dehydration include infants and may be higher than expected if only the adult population was included. At a time when non-cancer perforations of gastric and duodenal ulcer are falling, a perforation rate of 47 per 100 000 may be high, but this translates to only about 150 cases per year in Iceland, so that the confidence intervals on these data may be wide. It is difficult to explain the very low rate of admissions for pelvic inflammatory disease. If this represents a true low morbidity rate then this is a satisfactory outcome (Directorate of Health, unpublished data, 2010).

**Fig. A13.4:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



There are no data on chronic disease management.

Infant immunization levels are above 95% coverage, including for rubella immunization. For adults, influenza immunization rates are around 40% of people aged 60+. Cervical screening and breast screening are the responsibilities of the public health service, rather than of primary care.

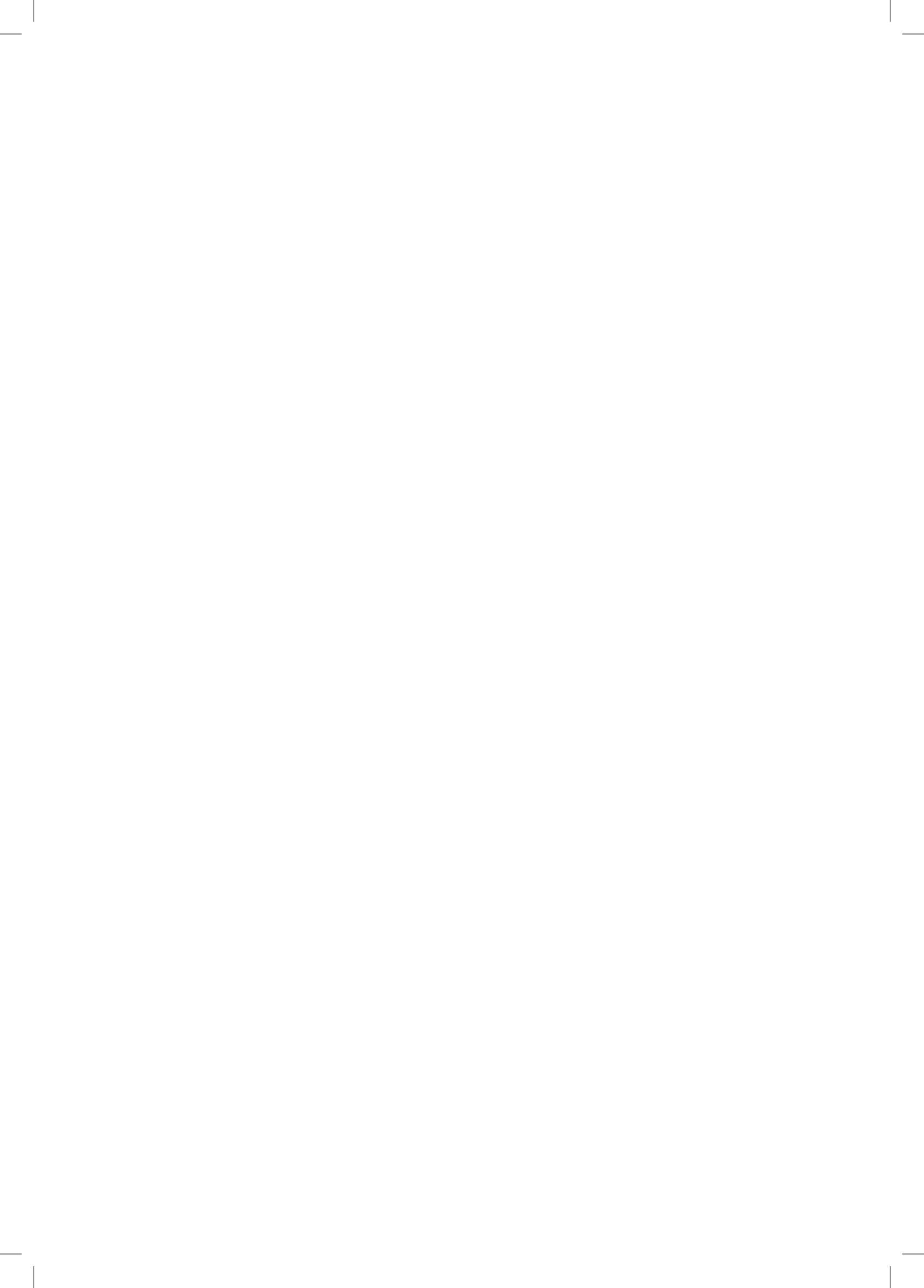
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# 14 Ireland

*A. Hutchinson*

## 1. The context of primary care

### Country and population

Ireland has a population of 4.2 million people and is thus one of the smaller European nations. The current population density (60/km<sup>2</sup>) is lower than the European average, with the lowest density to the west of the country (33/km<sup>2</sup>). In 2009, 20.9% of the population were aged 0–14 years and 11.7% were 65 years or older. Gender is equally distributed in Ireland (OECD, 2010).

### Development and economy

Until 2008 there was a steeply rising trend in GDP which was also reflected in increased spending on health care. GDP per capita (US\$ PPP) was one of the highest in Europe in 2007 at around \$48 000. However, this level is falling, unemployment had risen to around 12% in late 2009 and recent economic pressures have resulted in a need for savings and some staff reductions in the health services. In 2007, 35% of the population had attained upper secondary level of education (OECD, 2010). Ireland ranked 5th on the Human Development Index with 0.895 (UNDP, 2010).

### The health of the population

Although the population of people aged 65+ is a lower proportion of the total than in most other European countries, the age structure is expected to change considerably by the year 2041, with the numbers of

**Table A14.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Ireland	EU <sup>1</sup>	Ireland	EU <sup>1</sup>	Ireland	EU <sup>1</sup>	Ireland	EU <sup>1</sup>	Ireland	EU
1995	6.6	7.6	1187	1275.9	698.9	740.9	210.0	292.7	21.8	27.5 <sup>6</sup>
2000	6.1	7.9	1763	1608.0	615.8	669.0	222.7	295.1	21.7	28.3 <sup>5</sup>
2005	7.5	8.5	2924	2150.9	549.8	604.6	282.5	316.0	18.2	26.3 <sup>4</sup>
2009	8.7 <sup>7</sup>	8.8	3793 <sup>7</sup>	2788.2	516.7 <sup>8</sup>	564.8	311.2 <sup>7</sup>	321.6	17.0 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Ireland	EU <sup>2</sup>	Ireland	EU <sup>1</sup>	Ireland	EU <sup>1</sup>	Ireland	EU <sup>1</sup>
1995	1192	575.1	7.7	12.5	14.6	15.7	n.a.	6.6
2000	1401	655.9	7.4	10.3	14.3	17.7	n.a.	6.8
2005	1516	682.7	7.6	9.5	13.9	16.2	n.a.	6.8
2009	1517	745.5	7.1 <sup>8</sup>	8.8	14.1 <sup>8</sup>	15.6	n.a.	6.9

Sources: EU and IE average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008. <sup>8</sup> Year: 2007.

people aged 65+ increasing from 500 000 to 1.5 million in the context of a total population change of 4.2 million to 6 million. As a consequence the old age dependency ratio will increase from among the lowest in Europe (18% in 2009) to 36% in 2041 – although these figures are consistently lower than the EU27 averages (45% in 2041), principally because of the relatively large population of younger people in Ireland. Life expectancy of people 65+ in Ireland has now risen to 77.3 years for males and 82.1 years for females (2006), slightly above the EU15 average.

Irish respondents to the Eurobarometer study undertaken in 2006 rated their health better (89% good health) than any other European country, and had the lowest reported levels of long-standing illness or health problems (19%) (European Commission, 2007). Current public health concerns include the continuing high male death rate from accidents and the health of minority populations, particularly the travelling community.

#### Key characteristics of health services

Health service financing is a mix of public and private provision (McDaid et al., 2009). Hospital services are mainly financed by the state, although there is a large private sector and co-payment is common in primary and secondary health care.

Access to free health care services is gained through meeting the entitlement requirements for a medical card, which entitles the adult holder to free access to primary and secondary care, pharmaceutical services and dental care. Entitlement is based on means testing and there is now no upper age limit at which health care becomes free (a change introduced in 2008 as a result of financial constraint). Approximately 1.5 million people hold medical cards and a further 110 000 hold general practice visit cards, which entitle holders to free access to general practice services. Despite recent restrictions on access to free care for people aged over 70 years, the number of medical card holders is currently increasing (HSE, 2010c).

GPs are mostly private, self-employed, practitioners. Those who provide services to people holding medical cards are paid on a variable annual fee-for-service and most GPs choose to offer this service. Access to general practice care for those who do not hold a medical card costs around €60–80 per consultation and there is a capped co-payment of approximately €100 per month for medication (McDaid et al., 2009).

Out-of-pocket payments account for 13% of the total health expenditure, with an additional 6.4% of total accounted for in 2005 by private health insurance (held by around 50% of the population) (McDaid et al., 2009).

As Table A14.1 indicates, health expenditure per capita has been high in recent years but is now expected to fall back because of economic constraints. Health care resources in terms of staff and utilization tend to be lower than EU averages, although there are significantly more nurses employed than the average.

During the period 2008–2011 the Irish primary care system has been in a state of great change. Following a government decision to improve primary care access and quality (and in anticipation of a consequent reduction in hospital usage), the health service has planned to establish 530 primary care teams (PCTs) across the country (Department for Health and Children, 2001; HSE, 2010a). Most staff will be state funded, other than GPs and some of their own attached staff, and the teams are broadly based. By early 2010 about 220 teams were at least partly in operation and a further 184 teams were in development.

Primary care services are also provided to a significant extent through office-based specialists acting as private practitioners, for there is no “gatekeeping” function in the Irish health service. Specialists are also able to treat patients privately in state hospitals, although this aspect of the health service is now being more closely regulated (McDaid et al., 2009).

The number of physicians per 100 000 population is relatively low compared to the European average, although not dissimilar to that of the United Kingdom, and acute care admission rates are similarly at the lower end of the OECD range. Ireland does have a rather greater number of nurses per 100 000 than other countries, however.

## 2. Structure of the primary care system

### 2.1 Primary care governance

The Irish government national primary care strategy was published by the Department of Health and Children in 2001 as a formal public statement of intent (Department of Health and Children Ireland, 2001). The new system has been designed to improve access to primary care, to enhance levels of governance and to improve coordination between services. These measures are based on providing the same type of service to each defined population (about 8000–12 000 people), with some structural variation determined by a needs

assessment (for example, different types of service offered to a population of mainly older people or with a higher proportion of children).

Primary care services are managed by the Health Service Executive (HSE) on behalf of the Department of Health and Children, through four regional offices and, within each region, through local health offices. The HSE now provides public access resource use statistics on a quarterly basis, for those aspects of primary care that receive HSE funding (HSE, 2009).

Many PCT staff are directly managed, other than GPs and their employed staff, and some new premises are also managed by the HSE. Professional leads work from the local health office while also undertaking clinical practice in PCTs. GPs working within the HSE structure are contracted under a General Medical Services agreement, which sets out requirements for type of service and access arrangements. Some GPs choose to work entirely outside the General Medical Services framework, on a fully private practitioner basis.

Medical professionals are represented in discussions on primary care policy development by the Irish Medical Organization, and on academic and training matters by the Irish College of General Practitioners. Other professional bodies and employees are represented by professional bodies and trade organizations, currently working through a Partnership Board. Redevelopment of the primary care services was subject to consultation with the main health professions.

There is currently only a very limited quality management structure for primary care, mainly dependent on one of the local health office team acting as a development officer to the PCT. Arrangements for quality assurance now in place for the state hospital service, through the Health Information and Quality Authority, do not yet apply to primary care. Although there is no formal process to complain to PCTs, people can complain to local health offices in relation to publicly funded primary care services and to the Ombudsman in relation to private services.

### 2.2 Economic conditions of primary care

Primary care expenditure is estimated to be at least 13% of total health expenditure. Full health care coverage is

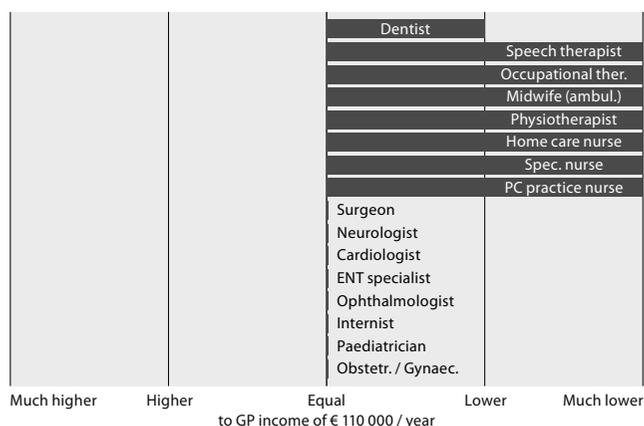
available to about 33% of the population under means tested eligibility criteria for medical cards and medical visit cards (McDaid et al., 2009).

GPs are self-employed, receiving income from a number of sources, including fee for item of service from under the General Medical Services contract for people with medical cards and from private consultation fees. Many GPs employ staff on a private basis. HSE staff working in PCTs and community services are funded by the state and are salaried (Layte et al., 2009; McDaid et al., 2009; Nolan, 2007).

Specialists working in office practice and offering primary care services are in private practice and paid on a fee-for-item-of-service basis, either privately or through health insurance (which is held by almost half of the adult population). They do not contract under General Medical Services.

The relative financial status of GPs and specialists is probably similar. Hospital-based specialists on the new consultant contract may have a ceiling on hospital earnings but may also engage in private office-based practice, while GPs may charge consultation fees for all who do not hold medical cards or visit cards. There are no easily available data from which to determine income levels for Irish GPs because of the large private practice component of gross fee income. However, since average annual gross fee income from the state is of the order of €110 000, GP income is likely to be akin to that of many specialist colleagues (see Fig. A14.1).

**Fig. A14.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP



### 2.3 Primary care workforce development

The future needs of the primary care workforce have recently been reviewed in the light of changing demographics and current training patterns (Layte et al., 2009; McDaid et al., 2009).

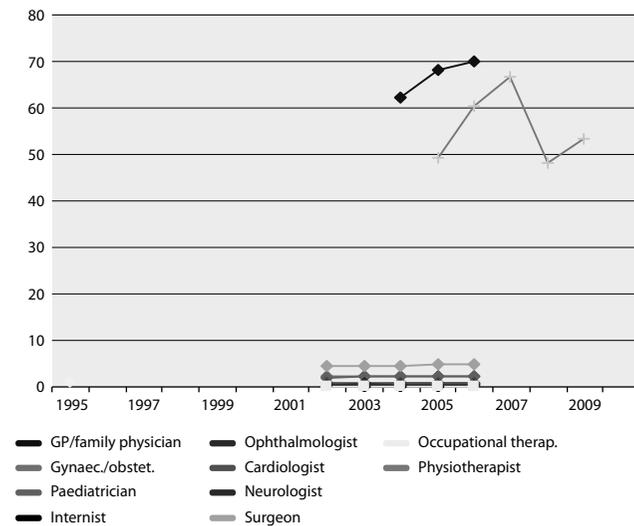
The primary care workforce includes all of the estimated 2500 GPs currently practising (Layte et al., 2009) and their employed staff. Note that the current OECD estimate of the number of GPs is based solely on those with a General Medical Services contract and is thus below the figure of 2500 quoted by Layte et al. Hospital specialists also provide primary care services in office-based practice – there is no accurate estimate of numbers or workload. The average age of GPs in 2005 was 51 years, with higher average age in the more rural areas (O’Dowd, O’Kelly & O’Kelly, 2006).

GPs who train in Ireland must now undertake a four-year training programme (usually two years in hospital and two years in general practice) before becoming eligible to receive government funding for provision of primary care services. Training must be undertaken in one of 12 Irish College of General Practitioners’ GP specialist training schemes. Office-based specialists who work in primary care do so on a private practice basis and are not required to have undertaken general practice training (Department for Health and Children, 2006; McDaid et al., 2009).

In their recent report on future workforce requirements for the Irish health service, Layte et al. (2009) demonstrate a need to considerably increase the number of GPs in training per annum if the country is to manage the impact of demographic change, which will create an ageing and expanding population. Both the current number entering GP training per year (120) and the proposed expansion to 150 training places are well below the projected training needs of 250 by the year 2020. Other factors influencing this significant increase in training numbers include the expected predominance of numbers of female GPs, high numbers of non-EU citizens training for medicine in Ireland and significant loss of trained GPs to work outside Ireland.

Primary care staff numbers and training places in other professions appear to be in reasonable supply (see Fig. A14.2).

**Fig. A14.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Source: Eurostat, 2011.

GPs are represented by the Irish Medical Association (which represents the rights of all doctors) and many are also members of the Irish College of General Practitioners, the professional standard-setting body. There is no peer-reviewed specialist primary care journal. Primary care staff (other than GPs) also often belong to professional associations with a special interest in primary care.

### 3. Primary care process

#### 3.1 Access to primary care services

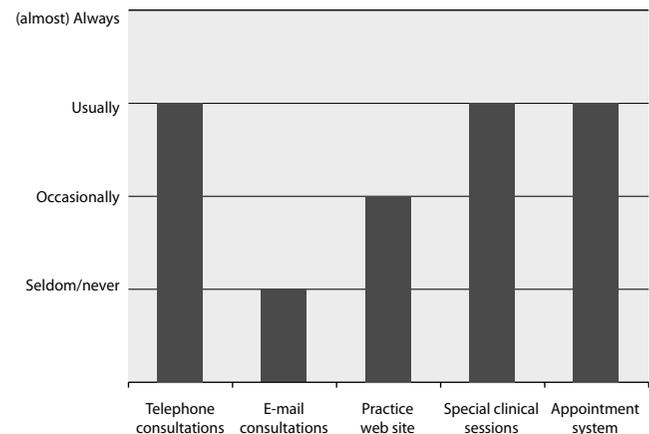
Primary care services are available across the country and, with the advent of the new PCTs, should improve both access and facilities. The distribution of GPs does, however, vary significantly across the country (65 full-time equivalents [FTE] per 100 000 to less than 45 FTE), with some western, more rural, counties having both increases in population and a reduction in the actual number of GPs (Layte et al., 2009).

Accessibility is also influenced by the provision of out-of-hours services, about half of which are usually now being provided by 13 GP cooperatives/out-of-hours services. In 2009 about 930 000 contacts were made by these services (HSE, 2010b). There are no data for provision at the individual general practice level or for private provision.

Data on the organizational aspects of primary care services suggests that there may be some variation in ICT use between those teams practising from modern

group practice premises and those working in more traditional arrangements (see Fig. A14.3). As new PCTs are developed, health authorities may begin to impose obligations with regard to minimum opening hours or days.

**Fig. A14.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Affordability of primary care services has been the subject of a number of studies (for example, Nolan, 2008; O'Reilly et al., 2007; Wiley, 2005), principally because of the significant element of co-payment required for GP consultations from people not covered by medical care and medical visit card entitlement, or increasingly from payments through health private insurance. For people earning just above the means tested entitlement income threshold, co-payments may be a considerable burden. O'Reilly et al. (2007) showed that the consultation rates of those holding medical cards were higher than those who paid for consultations (though it could be argued that people with visit cards had poor health and were less able to work).

Satisfaction with overall access to services is high (92% of respondents to the 2007 Eurobarometer survey) (European Commission, 2007) and Boilson et al. (2007) found that only 3% of people had to wait more than 48 hours to see a GP.

#### 3.2 Continuity of primary care services

The Irish primary care system does not operate a "list" system, other than for those people who hold medical cards or general practice visit cards (about 30% of the population in 2010). Official statistics are lacking on the average population size of a GP, but it is estimated to be

around 1680 patients (Layte et al., 2009; Nolan, 2007). Since there is also no “gatekeeping” function, people may also access office-based specialists as part of the primary care service, an element of the service that might be a constraint on providing good continuity of care in the primary care service.

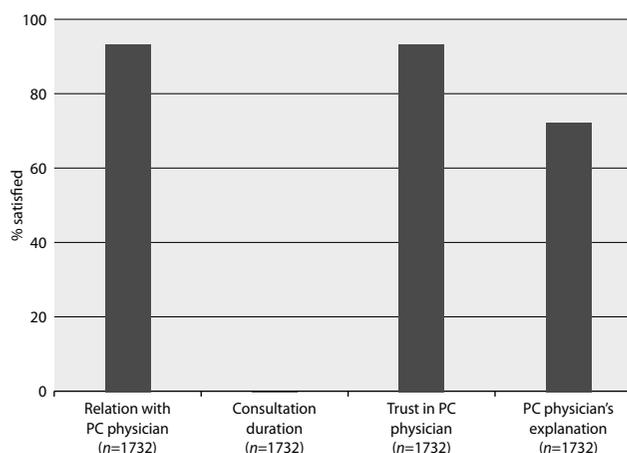
Use of computers to record information in the consulting room is becoming common (probably over 50%), but there appears to be variable access to these records for other clinical staff in the team. There is greater use of computerized records for the storage of administrative data (in up to 80% of practices) but little evidence of the use of ICT to pass information to other providers – though there are also some notable good examples of this practice.

Referral does not occur in all cases that are seen by a specialist, since people also use private primary health care services within the secondary care sector, with 50% of the population covered by private health insurance (McDaid et al., 2009). As a result of self-referral, specialists may not always communicate with GPs after an episode of treatment. Primary care practices usually receive information within 24 hours about contacts that patients have with out-of-hours services.

There is free choice of general practice and doctor in the Irish health service, including private office-based specialists. For those holding medical cards for General Medical Services, a GP must first be prepared to provide the service. If neither of the first two doctors chosen by a patient is unable to provide the service, the patient will be assigned to another doctor (Layte et al., 2009; McDaid et al., 2009; Wiley, 2005).

Data from the national study by Boilson et al. (2007) suggests that users are generally content with the quality of service (see Fig. A14.4) although there are as yet no other confirmatory studies.

**Fig. A14.4:** Patient satisfaction with aspects of care provision



### 3.3 Coordination of primary care services

Although there is no “gatekeeping” system, the HSE is developing a more comprehensive and modernized primary care service, with a broad range of primary care professional staff. The general practice service was traditionally separated from the state-funded community health service. Improved coordination is one of the objectives of the health strategy for the new PCTs. In addition to GPs and their employed teams, new PCTs now often comprise a wide range of health professionals, including social workers, midwives and public health nurses (all 1203 of whom are now included in PCTs) (HSE, 2010a), home-helpers and health care assistants, who provide support to the work of nurses and midwives. In early 2010 there are around 220 established PCTs and a further 184 in development, although not all of these have yet fully integrated GPs and their staff.

In the PCTs there is particular emphasis on high quality rehabilitation and re-ablement of people with chronic illness or for those recently discharged from hospital, and many PCTs include rehabilitation therapists and physiotherapists.

Wider clinical networks are also being established across populations of around 40 000 people to provide PCTs with additional resources, such as dentistry for medical card holders, speech and language therapy and dietetics. Networks also extend to secondary care services, such as older people’s services or chronic disease management, although there are currently few community mental health nurses attached to PCTs.

**Table A14.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	–	–
Treatment and follow-up of diseases (from a list of 9 items)	–	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Wedge resection of ingrown toenail</li> <li>• Excision of warts</li> <li>• Setting up an intravenous infusion</li> </ul>
Preventive care (from a list of 8 items)	–	<ul style="list-style-type: none"> <li>• Breast cancer screening</li> <li>• Routine paediatric surveillance to children up to 4 years</li> <li>• Groupwise health education</li> </ul>
Health promotion (from a list of 4 items)	–	–

Note: IUD – intra-uterine device.

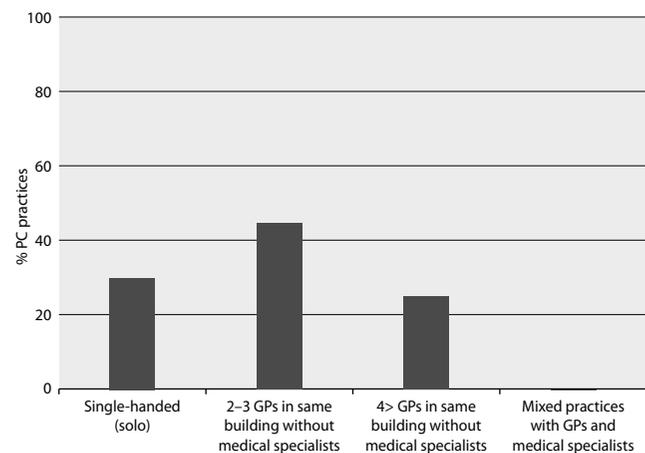
\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

Collaboration with secondary care staff tends to be by referral, although patients also self-refer. Networks of care between primary and secondary care that are now being developed may enhance joint working and there are examples of this already in evidence.

New, potentially important initiatives on integration of care services have recently been established by the HSE (HSE, 2010a). Plans for integrated care services between primary and secondary care have been established for chronic obstructive pulmonary disease, asthma, stroke, acute coronary syndrome, heart failure and diabetes. Successful implementation of these programmes could significantly improve the process and outcome of care for many patients, since previously there have been only limited attempts at this form of care management in Ireland.

Fig. A14.5 indicates that there is still a significant number of solo practitioners in Ireland. Evidence on the use of IT suggests that solo practitioners and small group practices tend to use computerized records less than the larger practices.

There is no direct integration between primary care services and the public health service.

**Fig. A14.5:** Shared practice

### 3.4 Comprehensiveness of primary care services

The larger general practices and the new PCT premises are well equipped with a wide range of equipment including, in some new premises, a very well-equipped physical therapy and rehabilitation suite.

First-contact care for common health problems is usual but by no means limited to general practice primary care, since office-based specialists also provide services and private Emergency Department services are becoming established in the urban centres for a consultation fee of around €150. Similarly, treatment and follow-up of diagnoses may be as much in the private office specialist

domain as in general practice, certainly in urban areas, and medical procedures are becoming a special interest area of general practice.

Preventive care is usually provided by general practice primary care (see Table A14.2) but mother and child preventive care may also be provided by office-based specialists. Health promotion may occur in the consultation, but may also be provided by specialist teams working from the local health office.

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

Prescribing rates for antimicrobials in Ireland are currently only available from one European study (ESAC, 2009) for 2006. The rate of antibiotic use for outpatients (that is, including hospitals) is 23 DDD per 1000 inhabitants per day, above the median for European states. There are no data available on ambulatory care sensitive diagnoses other than asthma (130 asthma admissions per 100 000 population in 2007).

Information on the quality of disease management is only available from the now completed EUPHIX and European Core Indicators in Diabetes projects. These show results on diabetes care indicators for 2005 to be somewhat similar to most of the western EU states, but the crude percentage of people with diabetes who had retinal screening in 2005 was very low at 10%, and the proportion of people with diabetes who had their blood pressure measured over a 12-month period was also low when reported in 2005 (Directorate-General for Health and Consumers, 2008).

Immunization rates for infants and young children are good at around 90% (WHO Regional Office for Europe, 2009). Breast screening and cervical cancer screening are provided by the public health service.

##### 4.2 Efficiency of primary care

There are no data about home visit rates because of the nature of the public/private split of the primary care service. Indeed, there is very little of this type of data available at all in the Irish primary care service because of the type of service arising from the funding mix.

OECD average consultation rates for adults in 2001 was around 2.8 visits per person per year, relatively low by some European country averages. Current consultation rates for general practice are not available, but a prediction based on 2001 figures suggests a total figure for people 16+ years of 11.2 million (approximately 3.6 per person per annum) (Layte et al., 2009).

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# 15 Italy

*P. Tedeschi*

## 1. The context of primary care

### Country and population

Italy is a country located in south-central Europe on a territory of 301 338 km<sup>2</sup> with a population of 56.99 million inhabitants (according to the last population census of 2001). With an estimated population of 60 million, Italy is the sixth most populous country in Europe and the twenty-third most populous in the world.

The country is subdivided into 21 regions. Four of these regions have a special autonomous status that enables them to enact legislation on some of their local matters. The country is further divided into 110 provinces and 8100 municipalities.

The population density of 202/km<sup>2</sup> is the fifth highest in the EU. The highest density is in northern Italy, as one-third of the country contains almost half of the total population. The natural growth balance per 1000 residents is among the lowest in Europe (years 2006–2009): – 0.3 balanced by the high rate of migrants entering in the country, so that the total growth rate results positive in 2009: + 5.7 (ISTAT, 2010).

Currently, the percentage of Italian people aged 0–14 years (14%) is lower than that of people aged over 65 (20%), and it is estimated that this trend will persist (ISTAT, 2010).

**Table A15.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Italy	EU <sup>1</sup>	Italy	EU <sup>1</sup>	Italy	EU <sup>1</sup>	Italy	EU <sup>1</sup>	Italy	EU
1995	7.3	7.6	1532	1275.9	626.7	740.9	388.8	292.7	21.3	27.5 <sup>6</sup>
2000	8.1	7.9	2064	1608.0	470.9	669.0	416.4	295.1	19.9	28.3 <sup>5</sup>
2005	8.9	8.5	2516	2150.9	399.9	604.6	379.2	316.0	21.2	26.3 <sup>4</sup>
2009	9.5	8.8	2886	2788.2	370.1 <sup>7</sup>	564.8	412.5 <sup>7</sup>	321.6	18.9 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Italy	EU <sup>2</sup>	Italy	EU <sup>1</sup>	Italy	EU <sup>1</sup>	Italy	EU <sup>1</sup>
1995	n.a.	575.1	10.1	12.5	16.3	15.7	n.a.	6.6
2000	560.6	655.9	7.7	10.3	15.8	17.7	6.0 <sup>8</sup>	6.8
2005	584.0	682.7	7.6	9.5	14.0	16.2	n.a.	6.8
2009	630.0	745.5	7.8 <sup>7</sup>	8.8	12.9 <sup>7</sup>	15.6	n.a.	6.9

Sources: EU and Italy average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008. <sup>8</sup> Year: 1999.

## Development and economy

Italy is a democratic republic and member of the EU. It is also a member of major multilateral economic organizations such as the Group of Eight Industrialized Countries (G8), OECD, the World Trade Organization and the IMF. According to the OECD, in 2004 Italy's economy was the sixth largest among industrial powers. The GDP per capita was PPP\$ 30 558.391 in 2008 (IMF, 2010). Between 1980 and 2007 Italy's Human Development Index has risen by 0.39% annually from 0.857 to 0.951 today which gives the country a rank of 18th out of 182 countries with data from 2007 (UNDP, 2009).

The unemployment rate was 8.2% in 2010 (Eurostat, 2010). Concerning education, 32.21 % of the population has finished its secondary level of education (ISTAT, 2010).

## Population's health

Various indicators show that the health of the Italian population has been improving over the last few decades. Average life expectancy reached 78.71 years for men and 84.22 years for women in 2007 while the healthy life expectancy at age 65 was 7.9 and 7.2 years respectively

in the same year (Eurostat, 2010). However, in almost all demographic and health indicators, there are marked regional differences for both men and women, reflecting the economic imbalance between the north and south of the country.

The main diseases affecting the population are circulatory diseases, malignant tumours and respiratory diseases, while smoking and rising obesity levels, particularly among young people, are growing important public health challenges.

The five leading causes of death in Italy, considered as mortality rates per 10 000 after the first year of age, standardized for region and cause of death were, for men, coronary heart disease, stroke, cerebrovascular diseases, accounting for 41.11%, followed by cancers (37.84%), respiratory diseases (9.15%), accidents (5.60%) and digestive diseases (4.59%). These percentages vary slightly for women: coronary heart disease, stroke, cerebrovascular diseases (28.86%), cancers (20.12%), respiratory diseases (3.73%), digestive diseases (2.89%), accidents (2.41%) (ISTAT, 2007a).

In 2007, the infant mortality rate was 3.3/1000 and the neonatal mortality rate was 2.4/1000 (ISTAT, 2009; WHO Regional Office for Europe, 2010). Total fecundity

rate (average number of children per woman) was 1.37 in 2007 (Osservatorio Nazionale sulla salute nelle regioni Italiane, 2009b).

#### Characteristics of the health care system

Health care in Italy is a constitutional right accorded to all Italian citizens. All Italians are enrolled in the National Health System (NHS) – founded in 1978 – from birth and have the right to select a paediatrician or GP according to their place of residence. Starting from the 1999 reform, health care in Italy has become a regionally based National Health Service which still provides universal coverage free of charge at the point of service. The national level is responsible for ensuring the general objectives and fundamental principles of the national health care system (including the National Agreement for primary care services). Regional governments, through the regional health departments, are responsible for ensuring the delivery of a benefits package through a network of public population-based health care organizations (local health authorities), public hospital trusts and accredited private providers (Ministero della Salute, 1992, 2006, 2009a, 2010a).

Total expenditure on health as a proportion of GDP has risen from 7.3% in 1995 to 9.5% in 2009 (see Table A15.1). Public spending on health accounted for 77.0% of the total in 2007, but over the years there has been considerable fluctuation, due to GDP rates and co-payment policies implemented by different governments. This has affected the private share of health care spending (WHO Regional Office for Europe, 2010a), without considering the out-of-pocket payments.

Compared to EU averages, Italy through time has become characterized by a decreasing use of hospitals (in terms of hospital beds, length of stay and admissions), still probably not balanced by a proper professional case-mix to manage chronic conditions (as there is still a higher number of physicians with a simultaneous lower incidence of GPs and a lower number of nurses).

## 2. Structure of the primary care system

### 2.1 Primary care governance

Since 1978 the role of primary care services has been strictly associated with the local provision of universal, equitable and accessible care in line with the original

constitutional right. However, as health care needs evolved through time, the original framework for primary care began to be too rigid and had a limited portfolio of services. From the end of 1990s, primary care has become central for the effectiveness of care and the sustainability of the NHS, which led to evolution of the national working agreements, active involvement of regions in defining their own primary care settings accompanied by some resistance to change from professionals (worried about losing privileges of capitation combined with gatekeeping) (Ministero della Salute, 1992, 2006, 2009a, 2010a).

The years 2007–2009 have seen an increasing debate, with different propositions for the future of primary care in Italy coming from successive national governments of different political colours, from the more advanced regions and also from a coalition of major GPs' trade unions (e.g. FIMMG – Italian Federation of General Practitioners, SNAMI – Italian National Syndicate of Independent Doctors, etc.) and scientific associations (e.g. SIMG – Italian Society of General Practice etc.).

The priority given by public authorities to achieve integration of GPs' developing networks, associations and other forms of grouping, including with other health care professionals, was indeed in Italy a “slow, creative but moving process”, observable since the National Agreement of 2005 between the government and GPs' trade unions. These forms of inter-professional collaboration, initially involving mainly GPs, have been enhanced through supplementary incentives delivered to physicians until the National Agreement of 2009 (where, for the first time, it is stated that “the participation of GPs in any existing form of group practice becomes compulsory”).

The aim is to create new organizational models based on the integration of different professionals (e.g. GPs, paediatricians, out-of-hours physicians, nurses, specialists working in outpatient facilities, social workers, administrative personnel, etc.) working together to improve accessibility, equity and continuity of care for patients. According to this vision, different models are currently activated in many regions, such as primary care units in Emilia Romagna region, territorial units of primary care in Veneto region and health houses in Toscana region.

As a last step of this national policy oriented towards full implementation of multidisciplinary practices, the Agreement of 2010 has introduced the concept of

“primary care complex units” conceived as an additional evolution of existing models of multi-professional practice, with a strong emphasis on continuity of care, chronic disease management and integration with social services. The challenge is to reshape Italian primary care according to the Chronic Care Model, moving from “reactive” medicine to “proactive” medicine.

Since 2005 the reorganization of primary care services is also a priority within the so-called “health deals” between government and regions, which allocate the distribution of national resources for health care among the 21 regions according to the provision of “essential levels of care” (among which primary care is included): in this perspective, the decentralization of responsibilities for primary care has basically followed the reforming process of the entire NHS (Coalition of Trade Unions and Scientific Associations, 2007; Ministero della Salute, 2009b, 2009c, 2010b).

The National Agreement, signed after negotiations between a central agency delegated by the government (called SISAC) and the main trade unions of GPs, defines the criteria for the distribution of primary care professionals on a territorial basis (basically, the number of doctors being decided according to the distribution of the population in so-called “territorial scopes” within each region). Exceptions can be made for areas that are not covered or disadvantaged areas according to national or regional regulation.

The Agreement fixes a maximum number of patients each GP or paediatrician can have on their list: full-time GPs and paediatricians can have respectively up to 1500 and 800 patients. Only one GP can be assigned to a territorial scope of 1000 residents (or a fraction of 1000 population above 500, deducting individuals between 0 and 14 years of age – who are assigned to paediatricians – as of 31 December 2010). Regions, however, can set up for their own territorial scopes a different ratio between GPs and a resident population, with a variation to be agreed in regional integrative agreements and up to a maximum increase of 30% compared to national contracts (Ministero della Salute, 2009a).

In 2000, a further measure introduced principles of fiscal federalism leading to a progressive full responsibility of regions for health care expenditure (including solidarity mechanisms among regions and additional regional taxes to face deficits). In this scenario the evolution of primary care services has been shaped according to local political

wisdom, the managerial capabilities of regional health departments and regional overall financial performance (Italian Parliament, 2000).

Since 2005 the National Agreement for primary care defines standards and objectives for professionals (mainly rewarded through capitation), delegating to regions the negotiation of additional objectives and incentives (mainly delivered according to organizational standards and pay-for-performance). Following this logic, the National Agreement tends to reflect national priorities (e.g. professional standards, immunization campaigns, evidence-based guidelines and other priorities according to national health plans or health deals between government and regions), while most regions do decide on additional priorities and organizational aspects of service provision (e.g. chronic disease management programmes, home care services, primary care delivery models). In this perspective variability in priority-setting and provision of care is increasing across Italian regions.

## 2.2 Economic conditions of primary care

The extension of universal health care coverage to the whole population is a key characteristic of the Italian health care system. Universal coverage entitles all citizens, regardless of their social status, to equal access to essential health care services that are necessary and appropriate to promoting, maintaining and restoring health in the population according to the principle of universalism.

Essential health services are provided free of charge or at a minimal charge, and include general medical and paediatric services; essential drugs (including for chronic diseases); treatments administered during hospitalization; rehabilitation and long-term post-acute inpatient care; instruments and laboratory diagnostics; as well as other specialized services for early diagnosis and prevention.

In 2008 the total public health care expenditure reached €106.5 billion (equal to 6.8% of GDP – adding private expenditure it reaches 9.1% of GDP); primary care direct costs accounted for €6.08 billion (5.7% of total expenditure, considering only payments to GPs, paediatricians, out-of-hours physicians and specialists working in community health care centres). Just as an additional comparator, pharmaceutical expenses prescribed by primary care professionals accounted for €11.2 billion – 10.5% of the total (OECD, 2009).

Until 1978, GPs and paediatricians were paid a fee-for-service by the patients' mutual fund. Since 1978, both GPs and paediatricians can choose to work full – or part-time for the NHS, with local health authorities paying them on a capitation basis. GPs and paediatricians are self-employed physicians working for the NHS through a national agreement which pays them mostly on a capitation basis according to the number of people (adults or children) registered on their list. Professionals can practise privately within regulated limits, above which their remuneration is downsized proportionally to the volume of private activity. Out-of-hours physicians and outpatient specialists working in community health care are directly contracted by local health authorities and remunerated by hourly fees according to the volume of activity.

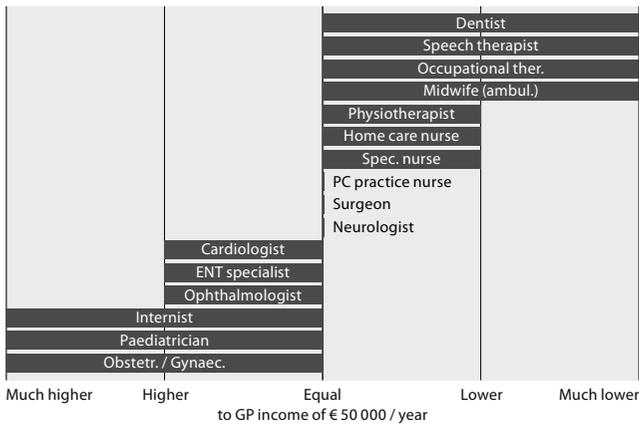
For instance, out-of-hours physicians or physicians for continuity of care (a service available daily from 8 p.m. to 8 a.m. and 24 hours during weekends – when GPs and paediatricians do not work) are a particular category of medical staff, as they are not required to be specialists or GPs (just physicians). Even GPs whose lists do not exceed an established number of patients can apply to be assigned to such a service by the local health authority alongside their activities in regular practice (especially during the tourist season or in disadvantaged areas).

The remuneration of GPs and paediatricians is modulated by national agreements between the central government and trade unions and consists of a fixed amount based on capitation (70% of income), a variable amount based on fees for services (e.g. minor surgery in an ambulatory setting, preventive activities, immunizations) and an additional part in the form of a pay-for-performance mechanism or other financial incentives. The fixed and the variable amounts are determined at national level, while each region and each local health authority can decide whether and how to provide the additional part. Financial incentives are increasing in terms of relevance for GPs' income: incentives have been devised, for instance, to provide the ambulatory setting with nursing and administrative staff, and an information system, to enrol patients in disease management programmes or to improve physicians' adherence to clinical guidelines. So far, these incentives have been linked to process and output results and not to clinical outcomes.

The National Agreement signed in 2009 introduced a fixed per capita payment equal to €40.05. Each GP receives an additional per capita payment based on the number of patients and on the years elapsed since graduation. The rate is currently between €1.91 for paediatricians with over 1400 patients and recent graduation and €18.46 for GPs with a small number of patients (less than 500) and over 27 years since graduation. Therefore, a GP with both an average number of 1000 patients and years of practice earns a fixed annual gross income of about €50 000. In addition, physicians who set up a group practice, inter-professional collaborations or organizational models receive additional per capita payments, with additional payments for protecting physicians against risks and for physicians working exclusively within the NHS. Fig. A15.1 shows that the income of an average GP is lower compared to the income of paediatricians, lower than that of some medical specialists, and higher than the income of paramedical professionals and nurses.

Historical expenditure, demographic characteristics and epidemiological indicators are proposed as variables to estimate the expected expenditure. The same payment structure applies to paediatricians, but per capita payments are higher than those of GPs: the National Agreement signed in 2009 introduced a fixed per capita payment equal to €83.65. Each paediatrician then receives an additional per capita payment based on the number of patients and the years elapsed since graduation. The rate is currently between €4.14 for physicians with 700 patients and recent graduation, and €37.96 for GPs with fewer patients (less than 250) and over 22 years since graduation (SISAC, 2010).

**Fig. A15.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP

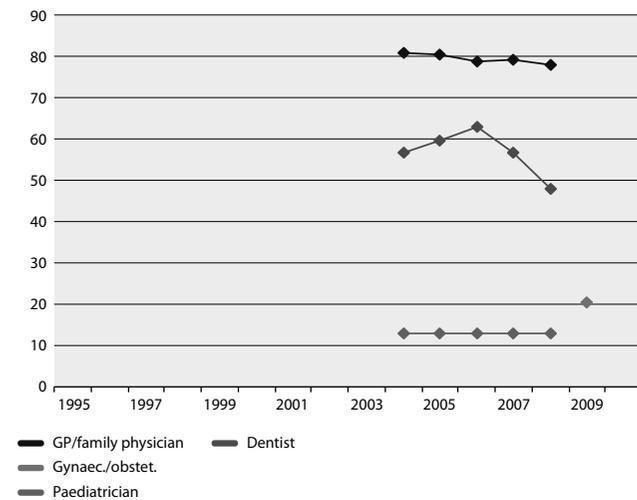


2.3 Primary care workforce development

Physicians have to graduate from a medical faculty in a public or private university. The undergraduate programme lasts six years, during or after which students must work within a hospital ward attending internships. After university, medical school graduates must take a state examination to be put on a register and be allowed to practise as physicians. They can then choose among various professional paths depending on the kind of postgraduate specialization programme attended. GPs and hospital physicians have to follow two different career paths: most medical students consider specializations based on hospitals as “a first best”, whereas the limitation of such places, the recognition of new specializations in general practice and the progressive feminization of the professional supply chain have recently increased the attractiveness of the general practice profession. Primary care physicians are authorized to work in the NHS after successfully completing a three-year specialization course in general medicine and acquiring clinical experience as temporary staff in NHS facilities. Regional health departments, under the supervision of the Ministry of Health, are in charge of coordinating courses and training for those specializing as GPs. GPs and paediatricians initially assess the patient and are expected to provide most primary care. They act as gatekeepers for access to secondary services, write pharmaceutical prescriptions and visit patients at home if necessary, as well as vaccinate patients against influenza during the vaccination campaign period. Moreover, in accordance with Legislative Decrees No. 256/1991 and 368/1999, certificates issued by other EU Member States to practise as a GP are equivalent to those issued in Italy and therefore are valid for practice in Italy (European

Council, 1986). Fig. A15.2 shows the decline in supply of GPs over a five-year period. The majority of GPs are older than 50 years of age (Faber, Voerman & Grol, 2009).

**Fig. A15.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Source: Eurostat, 2010

Future hospital doctors and specialists attend courses lasting from four to six years – depending on their clinical specialization – at a medical specialist school at university. Physicians have to take an exam to be admitted to the chosen specialist schools, since a *numerus clausus* is in place in each university hospital (and not at national level as in other European countries). Residents can benefit from a scholarship while attending their school. After specialization, their training will continue under the rules provided by the national continuing education in medicine programme, which was launched in 2000. All health professionals working in private or public facilities are required to undergo continuing education training programmes based on a learning credit-system.

In 1992 and 1994, major reforms in the nurses’ training programmes were introduced, which led to the closure of the old regional nursing – three-year – courses which enrolled students only after two years of high school. The main aim of legislation for the nursing profession over the last decade has been to provide nurses with a more autonomous and active role and to give them new responsibilities so that this important profession is no longer seen as an auxiliary one. Under the current arrangements, those wishing to be registered as qualified nurses are required to complete a three-year university degree and to take a state examination. Nurses can attend postgraduate programmes in paediatrics, geriatrics,

psychiatry, problematic areas and public health care. Complementary training courses are also aimed at training managers and teachers in nursing. In 2000, the role of nurse management was established, with a degree in the nursing sciences for training managers and teachers in nursing. In 2004–2005, a postgraduate two-year nursing specialist degree, which is only available to nurses with a three-year degree, began taking enrolments.

### 3. Primary care process

#### 3.1 Access to primary care services

All GPs are independent contracted professionals working within catchment areas named districts (60 000 inhabitants on average) that operate under the control of local health authorities and provide primary care, non-hospital based specialty medicine and residential care to the population living in the area in line with the “essential levels of care” established at national level. GPs are the first contact for the most common health problems and, as already pointed out act, as gatekeepers for other services. The availability of GPs (per 100 000 inhabitants) ranges from 89 GPs in Lazio to 52 GPs in the Autonomous Province of Bolzano. Shortages of GPs exist in some regions.

In 2007, each GP averaged 1094 patients. The regional range of average patient population ranged from 977 (Lazio) to 1605 patients (Provincia Autonoma di Bolzano). Each paediatrician averaged 1010 children, ranging from 855 in Sardegna to 1508 children in Provincia Autonoma di Bolzano (ISTAT, 2007b).

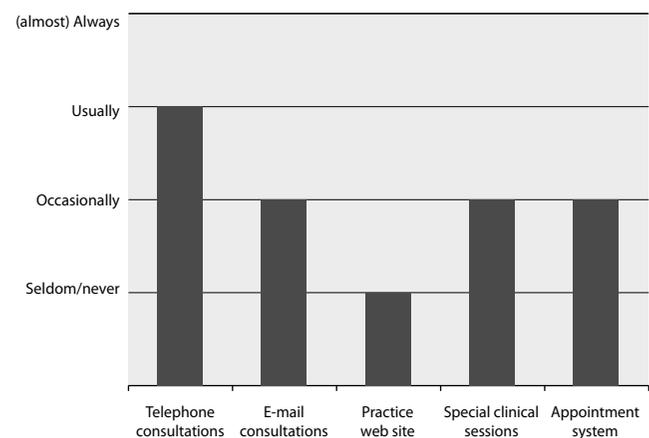
People may choose any GPs or paediatrician they prefer at any time, provided that the physician’s list has not reached the maximum number of patients allowed. Patients have free access to their GPs, according to opening hours, and do not have to pay for visits or prescriptions. Co-payments exist for certain drugs or specialist visits when these are prescribed by the physician. When patients choose to go directly to specialists they pay out of pocket.

General practices must be open for five days a week, preferably from Mondays to Fridays, with at least two opening times in afternoons or mornings and anyhow on Mondays. The number of hours is regulated according to the size of the patient list (a minimum of 5 hours per week to be guaranteed for lists of up to 500 patients, 10

hours per week for 500 to 1000 patients, and 15 hours per week for 1000 to 1500 patients). For group practices one afternoon session has to last till 7.00 p.m. Patients can receive primary care services during nights, weekends and public holidays from professionals other than their regular GP or paediatrician, the so-called out-of-hours physicians – as described in section 2.2 – usually working in different premises (such as independent ambulatories of local health authorities).

Organizational arrangements vary across regions; besides direct access, telephone consultations are still predominant while other measures are variably used (see Fig. A15.3).

**Fig. A15.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Source: Dobrev et al., 2008.

Exemptions to any co-payment exist (specialist consultations, diagnostics and rehabilitation services) for patients with oncological problems, chronic diseases, rare diseases and disabilities. Currently 56 conditions, 284 diseases and 47 groups of rare diseases are exempted (Ministero della Salute, 2001). Exemptions for drug co-payments are managed regionally. Also citizens with a family income below a certain level, with children below the age of 6 or adults above the age of 65, and those who are unemployed or receiving a minimum pension are exempted.

Specialist outpatient services, including visits and diagnostic and curative activities, are provided either by local health authorities or by accredited public and private hospitals. Services are listed in specific formularies that vary among regions. People are allowed to access specialist care in two ways:

- indirect access (referral): after approval by their GP, people are free to choose their provider among those accredited by the NHS (with no cost besides limited co-payments);
- direct access: patients can obtain an appointment through telephone central booking systems for the following health services: gynaecology, dental care, paediatrics (for those who have decided not to register their children with a designated paediatrician), optometric services and psychiatric services for children. In emergency cases, direct access is allowed for all health services. Urgency is established directly by the doctor. Visits to a specialist and medical devices incur user charges.

Since waiting lists can be very long and the quality of services is not always satisfactory, especially in central and southern regions, many people seek care in private clinics, particularly if they have voluntary health insurance (paid out of pocket, or provided by some employers) covering the associated costs. Moreover, 8% of people seek care outside their own region, mainly going from the south to the north of Italy.

In terms of available data, the latest report published in 2005 shows the number of outpatient visits in terms of laboratory tests, diagnostic procedures and other ambulatory services per 1000 inhabitants (Ministero della Salute, 2010d). For each category, a national parameter has been established as a benchmark. For laboratory tests, Veneto, Lombardy and Tuscany have definitively higher levels of usage than the benchmark (that is 13 510 tests per 1000 inhabitants), while the autonomous provinces of Trento and Bolzano, and the regions of Abruzzo and Molise have somewhat lower values.

Concerning access to integrated home care for terminally ill patients, and hospices, it is necessary to obtain a referral from GPs and the physician to manage this service, in which nurses from the local districts and specialized physicians from hospitals are also involved. Alternatively, a patient can have free access to any public hospital where palliative care and pain relief services are available. It is also possible for patients to approach a voluntary association delivering palliative care. These levels of care (specialist palliative care units within hospitals, hospices, day care centres and home care) are not available in all regions. Indeed, some regions have palliative care units within hospitals, which provide pain relief therapies. Non-profit-making and voluntary associations play an important role in providing further services, such as

psychological support, bereavement support to families and so on. Regions differ also in the financing system for palliative care. In Lazio, for instance, a daily rate is given to providers as a reimbursement for both hospice and home care, while the cost of pharmaceuticals is not included since the local health authority is supposed to provide the appropriate drugs. In contrast, in Lombardy, there are different rates for each level of care (hospital and hospice care), with the hospital palliative care rate being higher than that of hospice care.

### 3.2 Continuity of primary care services

People may choose any GP or paediatrician they prefer at any time, provided that the physician's list has not reached the maximum number of patients allowed (1500 for GPs and 800 for paediatricians). As a result, the actual freedom of choice depends on the prompt availability of a GP. Approximately 5–10% of patients change their physician every year.

According to the ICT Benchmarking Report in 2007 (Dobrev et al., 2008), the proportion of GPs reporting to have access to a computer in their consultation room is 84%. Only 2.4% of GPs reported using electronic networks for making appointments at other care providers for their patients, while 84.5% of GPs reported storing patient data electronically for administrative purposes. Finally, 7.2% of GPs declared they used electronic networks to transfer medical data to care providers/professionals.

Not all regions have enforced national guidelines as planned by a national programme for health care quality (Ministero della Salute, 2010a). This document contains guidelines for the systematic and periodic analysis of citizen satisfaction surveys, which, nevertheless, seem to have increased in the last few years. However, according to a Eurobarometer Survey from 2002 on public satisfaction with the health care system in the then EU15 countries, Italy remained below the EU average. The proportion of patients satisfied with GPs is 74.5% (European Commission, 2002).

At the regional level, available data on Italian citizens' satisfaction in 2005 (ISTAT, 2007b) show that the regions with the least satisfied respondents are Calabria (35.9%), Puglia (28%) and Sicily (25.6%), while those with the highest levels of satisfaction are Bolzano Province (68.8%), Valle d'Aosta (59.6%), Trento Province (58.8%) and Emilia Romagna (46.8%). Satisfaction differs across

**Table A15.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problems</li> <li>• Woman aged 50 with a lump in her breast</li> </ul>	<ul style="list-style-type: none"> <li>• Man aged 28 with a first convulsion</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Mild depression</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Joint injection</li> </ul>	<ul style="list-style-type: none"> <li>• Removal of sebaceous cyst from hair scalp</li> <li>• Fundoscopy</li> <li>• Insertion of IUD</li> <li>• Strapping an ankle</li> <li>• Excision of warts</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Influenza vaccination for high risk groups</li> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity, poor physical activity, smoking cessation and alcohol consumption</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

the north–south divide, with the northern and central regions consistently obtaining above-average results, whereas all southern regions scores are below average.

### 3.3 Coordination of primary care services

Starting from 1996 and especially after the National Agreement renewal in 2000, several financial incentives have been provided to GPs to enhance quality of care and accessibility by developing new forms of inter-professional collaboration and working in group practices. Currently, the three types of team-working – association, network, and group medicine – imply an increasing level of collaboration and a progressively higher financial reward for GPs joining in (Fattore & Salvatore, 2010). Group medicine requires that GPs share a clinic or practice where care is provided; in group medicine and networks, unlike in associations, GPs share the clinical history of their patients through electronic medical

records. Association implies only that individual practices ensure their opening hours are coordinated from Monday to Friday.

Starting from 2005 some regions, such as Emilia Romagna, Lombardia, Piemonte, Veneto and Toscana, have launched regional programmes for the development of organizational models based on the integration of different professionals, using different names such as primary care units in Emilia Romagna region, territorial units of primary care in Veneto region, health houses in Toscana region and many others where GPs, nurses and other practitioners deliver comprehensive health care in centres located outside the hospital.

A strong collaboration among GPs, social services and the public health department is developed and enhanced in most of the Italian regions. The only available data nationally dates back to a 2004 survey of the Ministry of Health. As of 2004, 59% of Italian GPs have joined a type of collaborative initiative, and 22% created a group practice (Ministero della Salute, 2004). More recent

regional data of 2006 show that variability regarding four or more GPs working in the same building without medical specialists can range from 11.5% in Calabria to 35% in Umbria.

Concerning the relationship with specialists, GPs act as case managers for their patients (on the basis of a trust-based relationship). When a patient is discharged from the hospital, he/she receives a referral letter to be given to the GP so that he or she can be informed about the care delivered in hospital. However, specialists can directly call GPs and these latter also have free access to visit patients during their stay in hospitals. The need to ensure hospital beds turnover and follow-up care to minimize possible hospital readmissions has led to various regional approaches to proper discharge management, improving the overall continuity of care, although not homogeneously across the country.

### 3.4 Comprehensiveness of primary care services

Italian GPs and paediatricians are mostly involved in first-contact care, treatment and follow-up of most common diseases, preventive care and health promotion (see Table A15.2). Traditionally they have lost through time many technical procedures which were absorbed by outpatient services. Therefore they capitalized on good patient relationship management for low and medium health problems but were forced to delegate to other levels of care whenever faced with issues above a minimum technical level (also on the basis of medical laws, which require specialists to sign medical examinations and reports). More recently an increasing number of GPs and paediatricians are however adopting new technologies in support of diagnostic capabilities (such as ecography and testing tools).

## 4. Outcome of the primary care system

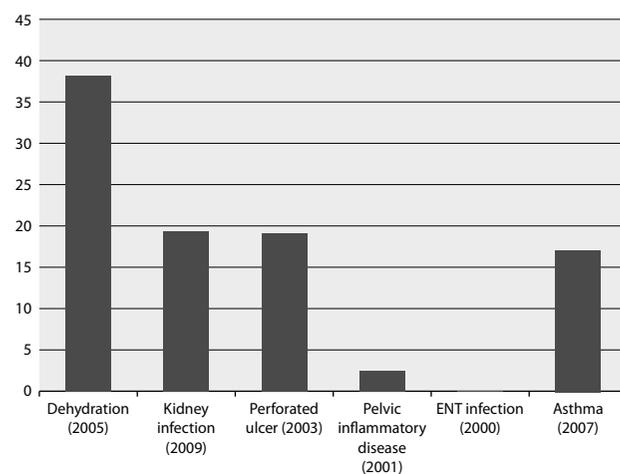
### 4.1 Quality of primary care

In Italy drug consumption (hospital sector excluded) was 924 DDD/1000 population for the year 2008. Differences in prescribing behaviour of GPs persist between northern and southern regions. The degree of adhesion to policies and guidelines regarding appropriateness of drug prescriptions launched by the state and regions may vary. The lowest rate of drug consumption is registered in the two autonomous provinces of Trento and Bolzano (691 and 784 DDD/1000 population) while

the highest is registered in Sicily and Calabria (1034 and 1054 DDD/1000 population). A similar pattern can be observed for antibiotic prescription (Agenzia Italiana del Farmaco, 2009).

Fig. A15.4 shows admission rates that can be used as indicators for quality in primary care; they are related to some conditions where prompt diagnosis and treatment at primary care level can prevent unnecessary hospital admissions. Relatively high hospital admissions rates exist for patients with dehydration, kidney infections, perforated ulcer and asthma.

**Fig. A15.4:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



Source: Ministero della Salute, 2010c.

The infant mortality rate can be used as indicator of quality of maternal and child health care as well as for the socioeconomic development of a country. During the twentieth century the infant mortality rate (IMR) declined dramatically in all developed countries. Italy also registered a remarkable reduction: in 2006 the IMR was 3.4 per 1000 live births, one of the lowest in Europe. Despite this important overall achievement, the IMR shows a large variability across the regions (ranging from 0.8 in Valle d'Aosta to 5.5 in Calabria), with higher rates in the southern regions (Osservatorio Nazionale sulla salute nelle regioni Italiane, 2009a).

The percentage of children receiving immunization in Italy is higher than 90% for the following diseases: diphtheria, tetanus and pertussis 96.7%; measles, mumps and rubella 89.6%; hepatitis B 96.1%; polio 96.3% (OECD, 2009; Osservatorio Nazionale sulla salute nelle regioni Italiane, 2009b).

Concerning the main screening programmes for adults, the average percentage of women aged 50–60 who participated in breast screening programme in 2007 was 62.3%, taking into account the gap between percentage of northern regions (99.1% in Emilia Romagna) and southern regions (11.8% in Puglia). The same could be observed for cervical cancer screening, where the percentage of women aged 25–64 who participated in screening in 2007 was 27% in the south, 40% in the centre and 46.9% in the north of the country (Osservatorio Nazionale sulla salute nelle regioni Italiane, 2009b).

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# 16 Latvia

*S. Veide, M. Lember, K. Pölluste*

## 1. The context of primary care

### Country and population

Latvia is one of three Baltic states in northern Europe with a territory of 64 589 km<sup>2</sup> and a population of 2.25 million (2010) composed of 46% men and 54% women. The average population density is 34.8/km<sup>2</sup> and the urban population accounts for 68% of the total population. The population is ageing: the proportion of children (aged 0–14 years) has decreased (from 21.4% in 1990 to 13.7% in 2008) and the proportion of people aged 65+ has increased (from 11.8% in 1990 to 17.3% in 2008). In 2008, the birth and death rates per 1000 inhabitants were 10.6 and 13.7 respectively (Statistics Latvia, 2011; WHO Regional Office for Europe, 2010).

### Development and economy

Latvia is a parliamentary republic. The Parliament (*Saeima*) consists of one chamber whose 100 members are elected every four years. The country is divided into 109 administrative regions and 9 republic cities. Latvia restored its independence in 1991, after which a number of economic and political reforms were implemented in the economic, social and health sectors. In the period 1990–2008 the gross national income per capita (PPP int. \$) more than doubled – from US\$ 7810 in 1990 to US\$ 16 740 in 2008 (WHO, 2010a). Following the years of economic stagnation in the early 1990s, Latvia posted Europe-leading GDP growth figures during the period 1998–2006. In the global financial crisis of 2008–2010 Latvia was the hardest hit of the EU Member States,

**Table A16.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Latvia	EU <sup>1</sup>	Latvia	EU <sup>1</sup>	Latvia	EU <sup>1</sup>	Latvia	EU <sup>1</sup>	Latvia	EU
1995	4.2	7.6	230.4	1275.9	1119.0	740.9	282.8	292.7	2.6	27.5 <sup>6</sup>
2000	4.8	7.9	385.7	1608.0	873.5	669.0	287.4	295.1	14.2	28.3 <sup>5</sup>
2005	5.3	8.5	691.3	2150.9	768.4	604.6	288.1	316.0	19.6	26.3 <sup>4</sup>
2009	7.5 <sup>7</sup>	8.8	1286.1 <sup>7</sup>	2788.2	640.1	564.8	299.5	321.6	19.5	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Latvia	EU <sup>2</sup>	Latvia	EU <sup>1</sup>	Latvia	EU <sup>1</sup>	Latvia	EU <sup>1</sup>
1995	486.4 <sup>8</sup>	575.1	14.9	12.5	n.a.	15.7	4.8	6.6
2000	456.9	655.9	11.4	10.3	20.0	17.7	4.8	6.8
2005	487.0	682.7	10.0	9.5	19.3	16.2	5.2	6.8
2009	465.0	745.5	8.5	8.8	16.3	15.6	5.6	6.9

Sources: EU and Latvian average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008. <sup>8</sup> Year: 1996.

with a GDP decline of 26.54% (WHO, 2010b). Since 2006, the GDP growth rate has dropped from 12.2% to – 18.0% in 2009, and it is forecast to be – 3.5% in 2010. In March 2010 the unemployment rate was 20.1% – the highest in the EU (Eurostat, 2010).

Between 1990 and 2007 Latvia's Human Development Index rose by 0.44% annually from 0.803 to 0.866, which in 2007 gave the country the rank of 48th out of 182 countries with data, and the adult literacy rate is 99.8% (UNDP, 2010).

#### Population's health

In the early 1990s, together with rapid changes in society, Latvia, like other central and eastern European countries, experienced a rapid worsening in the indicators of public health. The life expectancy started to decrease and reached its lowest level by 1994 – 65.5 years (59.0 years for male and 72.9 for females in 1995). Since 1995, however, life expectancy has been increasing, reaching 72.5 (67.0 for males and 77.8 for females) in 2008 (WHO Regional Office for Europe, 2010). Healthy life expectancy at birth in 2007 was 64 years (59 for males and 68 for females) (WHO, 2010b). The infant mortality rate per 1000 live births has decreased from 18.9 in 1995

to 6.7 in 2008 (WHO Regional Office for Europe, 2010). The total fertility rate has increased from 1.2 in 2000 to 1.4 in 2008 (WHO, 2010b).

Cardiovascular diseases, neoplasms and accidents are the most common causes of deaths. The mortality rates of the five most common causes of deaths in 2008 were as follows (all ages per 100 000 population): (1) atherosclerotic heart disease – 275.1; (2) neoplasms – 261.7; (3) cerebrovascular disease – 216.0; (4) accidents and poisonings – 108.1; and (5) acute myocardial infarction – 69.8 (Health Statistics and Medical Technologies State Agency, 2009).

#### Characteristics of health care system

Total health expenditure as a percentage of GDP has increased over the years to 7.5% (in 2008) and total health expenditures per capita were increasing until 2008 (see Table A16.1). The Latvian health care system is funded mainly through general taxes, which accounts for 58% of total health expenditure. Health expenditure makes up 10% of total government expenditure (2007) (WHO, 2010b). The Health Payment Centre is the institution that allocates state financing through contracts for provision of the state-guaranteed basic health care services with each health care provider,

and also for reimbursing pharmaceutical expenditures. Ambulatory health care is guaranteed to receive at least 38%, hospital services no more than 52% and emergency medicine at least 9% of the total government financing for health care (Cabinet of Ministers of the Republic of Latvia, 2006b). Ambulatory health care includes primary care and secondary care – specialized outpatient care. Primary care is organized as the first level of contact with the health system and provided by independently contracted family doctors who practise on the basis of a patients' list. Secondary care is provided mostly by health centres and specialists practising independently, and also by inpatient care provided by the hospital and its outpatient departments.

The number of nursing personnel increased to a maximum of 544 per 100 000 inhabitants in 2006, but then decreased to 465 in 2009. The number of physicians increased to 311 per 100 000 inhabitants in 2008, but decreased to 300 per 100 000 inhabitants in 2009. The number of family doctors increased in the period 1995–2009 from 7.5 to 58.5 per 100 000 inhabitants, indicating the replacement of the previous district doctors for adults, district paediatricians and other polyclinic-based specialists with trained general family doctors (WHO Regional Office for Europe, 2010). The average number of outpatient visits per person dropped from 8.1 in 1990 to 4.3 in 1996, although it has slowly started to increase again and reached a level of 6.0 visits per person in 2008. In 1990, there were 188 hospitals in Latvia, although by 2009 the number of hospitals had decreased to 69 and the number of hospital beds had also decreased from 1344 per 100 000 inhabitants in 1990 to 642/100 000 in 2009. The number of acute hospital admissions per 100 persons has been about 20 over the years, but the average length of stay in the hospitals has dropped by more than half, from 17.3 days in 1990 to 8.5 days in 2009 (WHO Regional Office for Europe, 2010). The average number of pharmaceutical prescriptions was 1760 per 1000 registered patients in 2008 (Health Payment Centre, 2010).

## 2. Structure of the primary care system

### 2.1 Primary care governance

The legal aspects of the primary care system are provided in a number of legal acts, but the common vision and goals of future primary care have not been reflected in any policy documents. The distribution of primary care

providers and facilities is defined by two regulations (Cabinet of Ministers of the Republic of Latvia, 2006b, 2009c). Practices in rural areas receive extra payment based on the patient density in the area, the distance to the hospital and payment for the salary of a nurse based on a population density formula. For three years after finishing their residency young doctors have to work under a contract with the Health Payment Centre, providing care in place where a doctor is required (i.e. under-doctored areas) or they must pay back the cost of their studies to the state within five years.

Primary care has a budget that is established at a national level and can be distinguished from other sectors. It was set in legislation until 2007 that the primary care budget should be at least 20% of payment for health care services, and that the ambulatory care budget should be at least 38% of payment for health care services. Currently the fixed primary care budget percentage has been abolished and the budget for primary care depends on the prices for different elements (for example, capitation payment, fixed payment for maintenance of the practice, tariffs for medical manipulations, payment for nurses, etc.) and is distinguished from the budget for laboratory tests and specialist consultations (Ministry of Health of the Republic of Latvia, 2010; Cabinet of Ministers of the Republic of Latvia, 2004, 2009c).

The inspection of health services provision (including primary care services) is coordinated by the Health Inspectorate of Latvia. The requirements for health personnel, rooms and equipment are set out in several legislative acts (Cabinet of Ministers of the Republic of Latvia, 1997, 2002, 2004, 2006b, 2009a). Physicians have to complete a three-year postgraduate programme to be certified in family medicine. There are obligatory continuing medical education or examination requirements for doctors to be recertified every five years. The major providers of primary care are family doctors, but 6% of the primary care workforce in 2010 still consists of “old” primary care physicians (district doctors) – paediatricians and internists – who have been contracted by the state to provide primary health care services. From 2010, the Health Payment Centre once again has to register new paediatricians in the primary health care providers list, and can finalize the contract for providing primary care services, but this contract will be cancelled from 2011. Dentists are also included in the primary care providers' list in Latvia.

Until 2008, each practice had to be certified once in every five years, and have all the items on a list of mandatory equipment for family physicians, but from 2009 requirements have been eased (Cabinet of Ministers of the Republic of Latvia, 2009a).

There are 16 clinical guidelines for family physicians, prepared by family physicians and other specialists and confirmed by the Ministry of Health, as well as guidelines for good family physicians' practice developed by the Latvian Family Physicians Association.

Community influence on a national level is expressed by patient satisfaction surveys. Also, medical professionals and representatives of patients contribute to primary care policy development informally. A Law on Patients' Rights came into force in 2010. Before then, patients' rights were laid down in the Law of Cure. There are no exact procedures for patient complaints in primary care regulated in normative acts, but it is laid down that patient complaints have to be submitted to the Health Inspectorate of Latvia or in the Court of Justice (Saeima of the Republic of Latvia 1997; Saeima of the Republic of Latvia, 2009).

## 2.2 Economic conditions of primary care

In 2005, expenditure on outpatient care was 23.4% of total expenditure on health (Eurostat, 2010). According to the Ministry of Health, expenditure on primary care was 9.7% of the total expenditure on health in 2009 (including dentistry for children -1% of total expenditure on health) (Ministry of Health of the Republic of Latvia, 2010). In Latvia, the whole population is covered for costs of general practice office visits, except for a minimal co-payment (€1.40) for those who do not belong to any of the special groups of patients whose co-payment is covered by state (see below) (Cabinet of Ministers of the Republic of Latvia, 2006b), while only 27% of inhabitants are fully covered for the costs of home visits (including children up to the age of 18, persons > 80 years old, those with severe disabilities (invalids), those who are receiving home care, palliative care or long-term negative pressure ventilation of lungs). Another category is patients with influenza who have to pay a co-payment for home visits only if there is an influenza epidemic (Health Payment Centre, 2010; Health Statistics and Medical Technologies State Agency, 2009; Cabinet of Ministers of the Republic of Latvia, 2006b). There is a €2.80 co-payment for home visits.

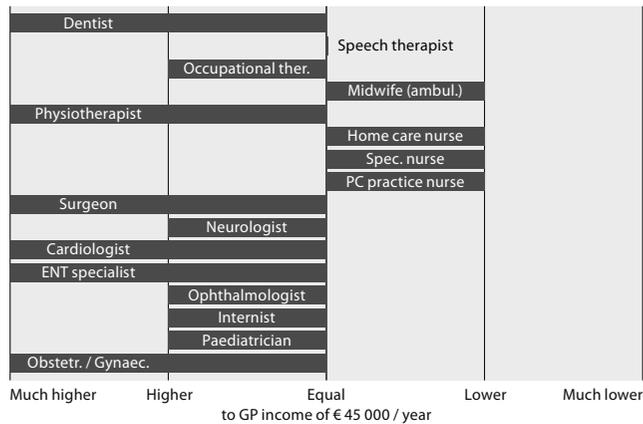
Most (90%) family doctors are self-employed practitioners with a contract with the health insurance fund – the Health Payment Centre – while about 8% of family doctors are salaried with health authorities and 2% are self-employed practitioners without a contract and are paid by patients out of pocket (Health Payment Centre, 2010). Salaried family doctors are paid according to the number of their patients and indicators of performance. Contractors with the health insurance fund receive a mix of capitation and fee-for-service and other specific components. A family physician's income is made up of the following:

1. capitation sum (85% capitation + 15% bonus/quality payment for the performance of quality indicators), and a capitation coefficient is used depending on the age of the patient;
2. additional fixed payments – for low patient density in the area, for long distance to the hospital, for maintenance of the practice, for family doctors' certificate (correspondence of practice to the normal structure of family doctor's practice);
3. extra benefits are given for medical care of chronically ill patients and certain medical treatments, including vaccination and prevention.

For example, in 2009, the defined quality criteria included: coverage of at least 65% of adult patients registered in the practice; preventive visits of at least 90% of children registered in the practice; immunization of children over 95%; tests for HbA1C for patients with type II diabetes at least twice a year for 80% of patients registered with the practice; emergency medical help calls for bronchial asthma and primary hypertension patients (Cabinet of Ministers of the Republic of Latvia, 2006b).

In 2008, the average gross annual income of family doctors was estimated to be €45 000, which includes costs for running the practice (that is, premises, equipment, care, employed staff, etc.), but does not include costs for lab tests or other investigations. This is the overall sum received from the state and patients (co-payments and some paid services). Compared to other specialists the family doctor's income is lower than for other medical specialists, but higher than the income of nursing staff and midwives (see Fig. A16.1).

**Fig. A16.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP



### 2.3 Primary care workforce development

The tasks and duties of family doctors are described and legally fixed by the regulation approved by the Cabinet of Ministers of the Republic of Latvia (2006b, 2009b). Family doctors provide comprehensive care irrespective of the patient's age, gender and health problems. The average number of working hours per week of family doctors is at least 40 hours and it is set out in legislation that the practice should be open at least 40 hours per week, although there is no obligation to work in the evenings after 19:00 hours or during weekends (Cabinet of Ministers of the Republic of Latvia, 2006b).

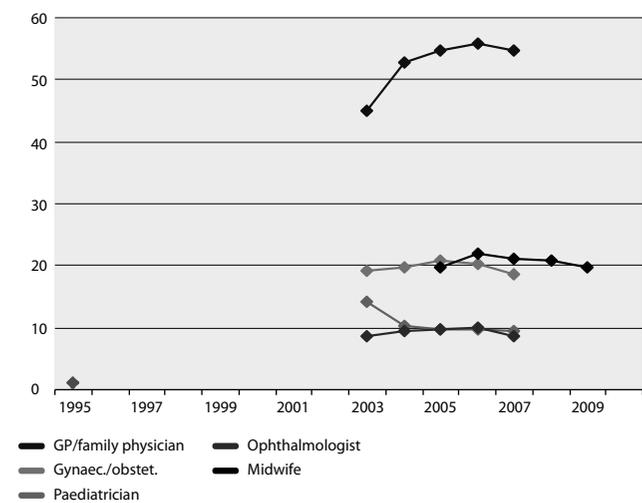
Family doctors in Latvia are trained at Rīga Stradiņš University and at the University of Latvia. The three-year postgraduate training programme in family medicine was first introduced in 1993 and the trainees spend 11–12.5 months in a primary care setting. Family medicine is also a subject in the undergraduate medical curriculum. At present, there is no special professional training for community nurses or primary care nurses. Since 2009, there is only one specialty – the “ambulatory nurse” – but up till this time there were also some community nurses (Cabinet of Ministers of the Republic of Latvia, 2006c).

At present, there are no data available from forecasting studies on current and future primary care workforce capacity needs. In the period 2003–2007 the supply of family doctors and dentists has increased, but the supply of other directly accessible medical specialists has not changed much (see Fig. A16.2) (Eurostat, 2010). In 2008 the total number of family doctors in Latvia was 1304 with an average age of about 47 years – 6% of family doctors are younger than 35 years, 28% of family doctors

are aged 35–44 years, 39% of family doctors are aged 45–54 years and 27% are aged 55 years or older (Latvian Family Physicians Association, 2010).

There are two family doctor associations in Latvia. The Latvian Family Physicians Association has 1225 members and the Latvian Rural Family Physicians Association has 503 members. Both societies work to defend the financial/material interests of family doctors and the Latvian Family Physicians Association also deals with professional development (including guideline development) and education. There is no professional journal in the field of family medicine or general practice in Latvia. Primary care nurses are not represented by any professional organization.

**Fig. A16.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



## 3. Primary care process

### 3.1 Access to primary care services

In 2008, the average number of family doctors per 100 000 population was 58 (Health Statistics and Medical Technologies State Agency, 2009). There are no data available about differences between urban and rural density of family doctors, nor about differences between the regions. However, shortages of family doctors exist in some regions.

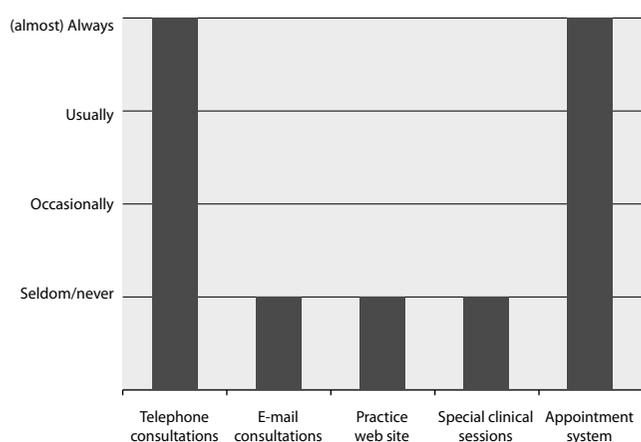
All family doctor practices and primary care centres are obliged to be open at least 40 hours per week (Cabinet of Ministers of the Republic of Latvia, 2006b). The number of home visits is not very high – on average 3.6 visits

per week per family doctor (private home visits are not included) (Health Payment Centre, 2010). Usually, family doctors do not provide an out-of-hours service. This service is provided by hospital emergency departments if the patient has emergency health problems outside the family doctor's office hours (Cabinet of Ministers of the Republic of Latvia, 2006b). After-hours primary care centres are occasionally used. Telephone consultations are used frequently and there are appointment systems for the majority of patient contacts. Practices that have web sites, or that offer e-mail consultations or special clinical sessions for certain patient groups are not yet common (see Fig. A16.3) (Dobrev et al., 2008).

There is co-payment for family doctor's services, but compensated medicines can be received according to a prescribed diagnosis. Compensation can be 100%, 75% or 50% depending on the diagnosis. There are patient groups that do not have to pay co-payments because it is covered by state (see section 2.2 above for details and there is a ceiling for co-payments (maximum €570 in a year).

In 2007, 5% of the patients rated family doctor care as not affordable, while 73% found that it is easy to reach and gain access to family doctors (European Commission, 2007).

**Fig. A16.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



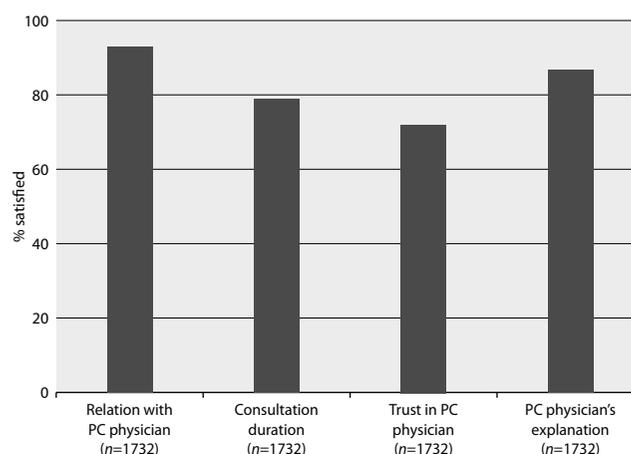
### 3.2 Continuity of primary care services

All family doctors have a patient list, averaging 1585 people (in 2009) (Health Payment Centre, 2010). Over the years, about 80% of patients reported visiting their family doctor if they had health problems. To guarantee continuity of care, all family doctors routinely

keep records for all patient contacts, except telephone and e-mail consultations (Cabinet of Ministers of the Republic of Latvia, 2006a). In 2007, 51% of family doctors reported having access to a computer in the consultation room and 67% of family physicians reported use of a computer in their work, although it is not known whether the computer is at their office or at home (Latvian Family Physicians Association, 2008). Computers are used mainly to keep patients' records, but also to prescribe medicines, to produce financial and administrative documents, to book patients' appointments and to search for expert information on the Internet (Dobrev et al., 2008). Clinical record systems are unable to generate lists of patients by diagnoses or by health risks, however. When family doctors refer their patients to a medical specialist they always use a referral letter, and specialists usually communicate with referring family doctors after an episode of treatment. However, family doctors usually do not receive information within 24 hours about contacts that patients have with out-of-hours services (Cabinet of Ministers of the Republic of Latvia, 2006b).

Patients are free to choose the family doctor they want to register with, but this choice is certainly limited in some areas where the population density is low and there is only one family doctor for the region (Cabinet of Ministers of the Republic of Latvia, 2006b). Patient satisfaction with family doctors is high (reported 2008); and the majority of the patients in 2010 reported being satisfied with their family doctor and explanations given by family doctors; patients also trust their family doctors and are satisfied with the available time during consultations with their family doctor (see Fig. A16.4) (Health Payment Centre, 2010; Toma, 2010).

**Fig. A16.4:** Patient satisfaction with aspects of care provision



**Table A16.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Cancer (in need for palliative care)</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	<ul style="list-style-type: none"> <li>• Rheumatoid arthritis</li> </ul>
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Removal of sebaceous cyst from hairy scalp</li> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from the cornea</li> <li>• Joint injection</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Cholesterol level checking</li> <li>• Infant vaccinations</li> </ul>	<ul style="list-style-type: none"> <li>• Testing for sexual transmitted diseases</li> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Routine paediatric surveillance of children up to 4 years</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

### 3.3 Coordination of primary care services

There is a partial gatekeeping system in Latvia. In general, people need a referral from a family doctor to see a specialist, with the exception of gynaecologists and sport medicine physicians (only for athletes). Paediatricians, ophthalmologists and children's surgeons are directly accessible specialists since 2009. Psychiatrists, endocrinologists, oncologists, respiratory specialists, narcologists, dermatologists and STD specialists are directly accessible if patients have a specific diagnosis. Direct access to the dentist paid by the state is available only for children, so adults have to pay privately. Direct access to all specialists is possible if costs are paid privately (Cabinet of Ministers of the Republic of Latvia, 2006b).

Most family doctor practices (92%) are single-handed (solo practices), while 8% of practices are mixed practices with family doctors and medical specialists (Health Payment Centre, 2010). This refers to the legal status of practices and does not exclude the existence of shared locations among physicians (no data is available on this). Also, cooperation with medical specialists is not very close (e.g. joint consultations or replaced specialist care are uncommon), but it is quite common for medical specialists to give clinical lessons for family doctors.

The closest cooperation within primary care is with the practice nurse, nurse practitioners, and also with other family doctors. Cooperation between family doctors and home nurses, social workers or other primary care specialists is not common. Nurse-led activities like health education or diabetes care are quite uncommon in primary care.

In general, clinical patient records of family doctors are not used routinely to produce health statistics at national and regional level in order to identify health needs and priorities for health policy. Nationwide health surveys are only conducted incidentally.

### 3.4 Comprehensiveness of primary care services

The minimum set of medical equipment of family doctor practices was specified by a regulation of the Cabinet of Ministers, and practice certification took place every five years according to the regulation, but was cancelled in 2009 (Ministry of Welfare, 1999).

In 2008, 16% of total patient contacts were handled solely by family doctors without referrals to other providers (referrals to laboratory, visual and functional

diagnostics and other auxiliary services are included in primary care) (Health Payment Centre, 2010). Patients visit their family doctor with a variety of health problems (such as lung diseases, heart diseases, peptic ulcer, diabetes type II, etc.), some mental health problems like mild depression as well as in cases of children's health problems (see Table A16.2). Patients with mental health problems also can visit a psychiatrist or psychotherapy specialist; women with gynaecological problems and pregnancy usually prefer to see the gynaecologist or midwife. Routine paediatric surveillance for children up to 4 years, including the infant vaccination, is almost always performed by family doctors, as is immunization for tetanus and cholesterol checking, while family doctors usually perform influenza vaccination and allergy vaccination as well. Procedures like insertion of an IUD, removal of a rusty spot from the cornea, joint injection, strapping an ankle or funduscopy are only performed by family doctors occasionally. Screening for breast or cervical cancer or testing for sexually transmitted disease is not a very common activity in family doctors' practices, nor is groupwise health education usually provided, but individual counselling in the case of different health risks is provided almost always by family doctors.

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

The average number of prescriptions annually provided by family doctors in 2008 was 1760 per 1000 registered patients (Health Payment Centre, 2010) and the use of antimicrobials for systemic use in ambulatory care in 2007 was 13 DDD/1000 inhabitants/day (ESAC, 2009).

The quality of diabetes care is described by following indicators (in 2008): (1) crude percentage of the population with diabetes aged >25 with cholesterol >5mmol – 65%; (2) crude percentage of the population with diabetes aged >25 with blood pressure above 140/90 mm Hg measured in the last 12 months – 34.8%; (3) crude percentage of the population with diabetes aged >25 with HbA1c – 45.5%; (4) crude percentage of the population with diabetes aged >25 with overweight and obesity and BMI measured in last 12 months – 91.8%; (5) crude percentage of the population with diabetes aged >25 with eye fundus inspection in the last 12 months – 72.3% (Cebolla & Bjornberg, 2008; Centre of Health Economics, 2010).

There are no data available about the quality of COPD and asthma care. The number of hospital admissions for people with a diagnosis of asthma per 100 000 population in 2008 was 160.6 (Health Payment Centre, 2010).

The percentage of infants vaccinated within primary care against various infections in 2008 was as follows: (1) diphtheria – 97.3%; (2) tetanus – 97.3%; (3) pertussis – 97.3%; (4) measles – 96.6%; (5) hepatitis B – 96.2%; (6) mumps – 96.6%; and (7) rubella – 96.6% (7). In 2008, the percentage of population aged 65+ vaccinated against flu was 2 (Infectology Centre of Latvia, 2010).

Latvia introduced organized cancer screening in 2009 and there is two-year mammogram programme in Latvia. During the years 2006–2008 20.1% of women aged 52–69 years had at least one mammogram in the past three years (Health Payment Centre, 2010; Cabinet of Ministers of the Republic of Latvia, 2006b). Organized cervical cancer screening was also introduced in 2009, and during 2006–2008, 46.4% of women aged 21–64 years received a Pap smear test (Health Payment Centre, 2010; Cabinet of Ministers of the Republic of Latvia, 2006b; Viberga & Engele, 2007).

##### 4.2 Efficiency of primary care

In 2008, the number of family doctor consultations per capita per year was 3.0 (Health Payment Centre, 2010; Health Statistics and Medical Technologies State Agency, 2009) and the proportion of home visits of all family doctor–patient contacts was 3.8% in 2009. Private home visits are not included (Health Payment Centre, 2010). The estimated average consultation time is 12 minutes. At present, there are no data about the number of telephone consultations of all GP–patient contacts and about the number of new referrals from family doctors to medical specialists per 1000 listed patients per year.

#### Conclusion

Latvia has reformed its primary health care from the Soviet model to a modern system based on family doctors. The patients list system, the combined payment system and the independent contracting of physicians are the key elements in primary health care. Family doctors provide a broad variety of services. The major problem in Latvia is its vulnerability to decisions being made without involving all counterparts in the health care system. Poor funding also has its impact on health care. In Latvia the

development of academic family medicine is far behind its neighbours in Estonia and Lithuania, and the position of family medicine at the universities is weak.

### Acknowledgements

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17

# Lithuania

*V. Kasiulevičius, M. Lember*

## 1. The context of primary care

### Country and population

The Republic of Lithuania is a new and active member of the EU (since 2004), lying on the eastern coast of the Baltic Sea with a 90 km stretch of the Baltic Sea coast and a total area of 65 300 km<sup>2</sup>. Nearly one-third of the territory is covered by forests. The population of Lithuania is 3.35 million and 84% are ethnic Lithuanians. Several minorities exist, such as Poles (6.1%), Russians (4.9%) and Belorussians (1.1%). Population growth rate is -0.279% (2009). According to 2009 estimates, the age structure of the population was as follows: 0–14 years 14.2%; 15–64 years 69.6%; 65 years and over 16.2%. The median age was 39.3 years (male: 36.8, female: 41.9). Population density is 54 inhabitants per km<sup>2</sup> in 2008 (Eurostat, 2011).

The Lithuanian head of state is the President, who is elected directly for a five-year term. The President, with the approval of the parliamentary body, the Seimas, also appoints the Prime Minister and, on the latter's nomination, the rest of the cabinet, as well as a number of other top civil servants and the judges for all courts. The unicameral Lithuanian Parliament, the Seimas, has 141 members who are elected for four-year terms (Lithuanian State Department of Tourism, 2010). Lithuania has a national income per capita of PPP\$ 16 481 (2010 estimate). Between 1990 and 2007 Lithuania's Human Development Index rose by 0.29% annually from 0.828 to 0.870 today. The Human Development Index for Lithuania gives the country a rank of 46th out of 182

**Table A17.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Lithuania	EU <sup>1</sup>	Lithuania	EU <sup>1</sup>	Lithuania	EU <sup>1</sup>	Lithuania	EU <sup>1</sup>	Lithuania	EU
1995	4.9	7.6	335	1275.9	1109	740.9	406	292.7	–	27.5 <sup>6</sup>
2000	6.5	7.9	559	1608.0	975.7	669.0	401	295.1	10	28.3 <sup>5</sup>
2005	5.9	8.5	836	2150.9	812.1	604.6	399	316.0	17	26.3 <sup>4</sup>
2009	5.9	8.8	1178 <sup>7</sup>	2788.2	813.9	564.8	406	321.6	18	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Lithuania	EU <sup>2</sup>	Lithuania	EU <sup>1</sup>	Lithuania	EU <sup>1</sup>	Lithuania	EU <sup>1</sup>
1995	945	575.1	14.75	12.5	19.63	15.7	7.0	6.6
2000	800	655.9	11.2	10.3	22.18	17.7	6.4	6.8
2005	742	682.7	10.2	9.5	21.33	16.2	6.9	6.8
2009	734	745.5	9.6	8.8	21.53	15.6	6.9	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008.

countries with data. The unemployment rate in Lithuania is 15% (2009) and 13% of the Lithuanian population have an upper level of education (Department of Statistics to the Government of the Republic of Lithuania, 2010).

#### Population's health

Life expectancy at birth is 74.9 years for the total population; 70 years for men and 80 years for women. Infant mortality rate is 6.5 deaths/1000 live births and the total fertility rate is 1.47 children born per woman (2008). The structure of causes of death has remained unchanged for a number of years with more than half of all deaths (54%) due to circulatory system diseases and, of this proportion, ischaemic heart disease accounted for 62% of deaths and cerebrovascular diseases for 25%, while 19% of the population died from malignant neoplasms. Even though the number of deaths as a result of external causes decreased by 8.8% in 2008, the mortality rate resulting from these causes remains high, in particular of young and middle-aged people. Suicides were the most widespread external cause of death, 23.2% of all external causes. Since 2004, diseases of the digestive system have ranked fourth among the most prevalent causes of death (5.8% of all deaths in 2008), overtaking diseases of the respiratory system (Health Information Centre, 2009; WHO Regional Office for Europe, 2010).

#### Characteristics of the health care system

After the restoration of its independence in 1990, Lithuania inherited a centralized system that mainly delivered inefficient health care management and resource allocation. It opted for restructuring and decentralization as strategies that would increase the efficiency of health services. In 2008, there were 163 hospitals and about 430 primary health care institutions (including subdivisions) functioning in the health system. There were 2341 private health care establishments in 2008, but only 1403 (or 60%) of them presented annual reports on their activities and resources, including 174 primary health care institutions and 803 dentist's offices. At the end of 2008, there was a total of 13 403 physicians (40 per 10 000 inhabitants) and 2287 dentists (6.8/10 000 inhabitants) working in Lithuania, and 92% of all physicians were practising (see Table A17.1). Since 2000 the number of physicians in different specialties has changed considerably. The number of family doctors (general practitioners [GPs]) increased more than three times and, for example, the number of anaesthesiologists increased by 25% while the number of paediatricians decreased by 29% and internists by 26% (some of them were retrained as family doctors). At the end of 2008 there were 23 976 (71.6/10 000) nurses.

In 2008 there were 27 358 hospital beds or 81.7 per 10 000 inhabitants. Since 2000, the number of hospital beds has decreased by 20% and the number of nursing beds has increased by 35%. In 2008, according to preliminary data, expenditure on health constituted LTL 6.4 billion (€1.8 billion) at current prices, 5.98% of GDP. In 2008 public expenditure on health constituted LTL 4.86 billion (€1.41 billion). Public expenditure on health as a percentage of GDP had been decreasing in 1998–2004. In 2005–2006 it started to increase and in 2008 reached 4.37% of GDP. In 2008 public sector average expenditure on health care per capita amounted to LTL 1916 (€556) (Health Information Centre, 2009; Ministry of Health, 2010).

## 2. Structure of the primary care system

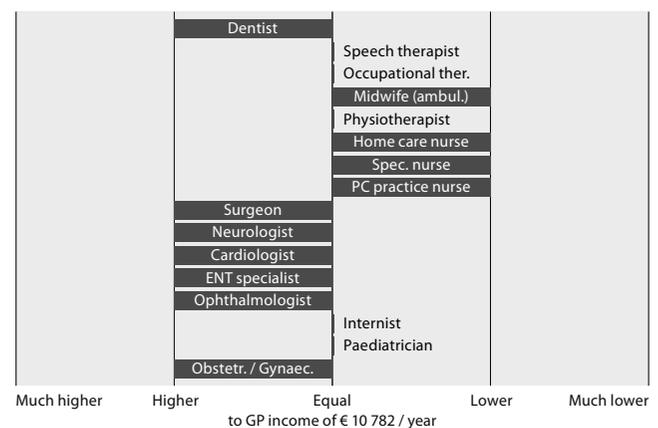
### 2.1 Primary care governance

In 2007 the Ministry of Health approved the concept of primary health care development – a document including situation analysis in primary care, development goals and objectives, service providers, primary care evaluation criteria, implementation plan. This includes the person's primary health care, primary mental health care, dentistry, nursing, together with service development. The plan provides for primary personal health care developments in the period 2007–2015. Decentralization of the health care system was achieved by segregating primary health care (family physicians), secondary health care (physicians – specialists), and tertiary health care levels (high specialization university clinics). The development and reformation of primary health care was seen as a key factor in the entire health care reform. Municipalities support community primary health centres, which account for 70% of all primary health care in the municipal territory. The rights of patients are regulated by the Constitution of the Republic of Lithuania, the Civil Code (2000) and other laws. The new Civil Code of Lithuania was adopted in 2000 and came into effect in 2001. The health law issues regulated by the new Civil Code may be classified into two major groups. The first group deals with the rights of patients as basic human rights. The second group deals with the rights of patients as one of the essential elements of a so-called “contract for health services”. These rights are also regulated in the Law on the Rights of Patients and Compensation for Damage to their Health of 1996, which was not abrogated when the new Code came into effect (Ministry of Health, 2005b, 2005c, 2010).

### 2.2 Economic conditions of primary care

Expenditure on outpatient care in Lithuania is 15.88% of total expenditure on health (Eurostat, 2011). Total expenditure on prevention and public health is 1.3% of total expenditure on health (2006) and 99% of the population is fully covered for primary care costs. About 95% of the population is covered or insured by social health insurance, it covers costs of general practice services (office and at home) and of medicines prescribed in primary care or general practice. Eighty per cent of GPs are in salaried service with national, regional or local authorities. Self-employed GPs contracted to health insurance fund(s) or health authorities account for 19% of the total. Self-employed GPs without a contract (paid by patients out of pocket) account for only 1% of the total number of GPs. A Lithuanian GP's salary is related to both the number of their patients and to indicators of performance. Self-employed GPs are paid a mix of capitation and fee-for-service payment. Performance indicators include children's preventive health checks compliance rate, individuals with chronic diseases (hypertension, diabetes mellitus, bronchial asthma, COPD) hospitalization rate and participation in cervical cancer and prostate cancer preventive programmes. Gross annual income of a “mid-career” GP (about 10 years' experience and with an average size of practice) is €10 782 (Ministry of Health, 2005b, 2010). Medical specialists and dentists usually have a higher income compared to GPs while other primary care-based professionals have a lower income. The income of specialists in internal medicine and paediatricians is comparable to that of GPs (see Fig. A17.1).

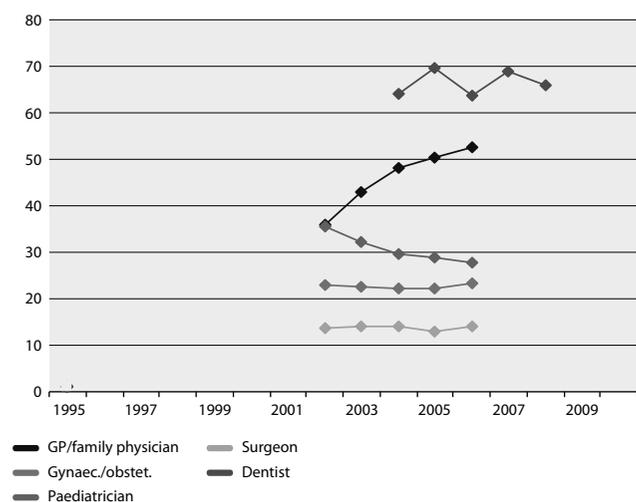
**Fig. A17.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP



### 2.3 Primary care workforce development

Fig. A17.2 shows a high increase in supply of GPs over time (Eurostat, 2011). The total number of active Lithuanian GPs as a ratio to the total number of active specialists is 0.23 (2006). All tasks/duties of Lithuanian family doctors have been described in the “Lithuanian medical norm MN 14:2005 Family physician”. GPs work 38 hours per week. In Lithuania all medical universities have a postgraduate programme in family medicine, first introduced in 1993 at Vilnius University and Kaunas University of Medicine. Forty hours of family medicine is taught in the undergraduate medical curriculum at Vilnius University and Kaunas University of Medicine. The family medicine residency takes 3 years and trainees spend at least 12 months in a primary care setting. The Lithuanian Society of General Practitioners and the College of General Practitioners are the two professional associations representing family doctors. The primary aims of these societies are to serve the patient and the GP by encouraging and maintaining the highest standards of general medical practice. Both GPs’ societies are recognized bodies for the accreditation of specialist training in general practice in Lithuania. *Lithuanian GP* is a journal on family medicine/general practice published monthly in Lithuanian, with abstracts in English (Ministry of Health, 2010).

**Fig. A17.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period

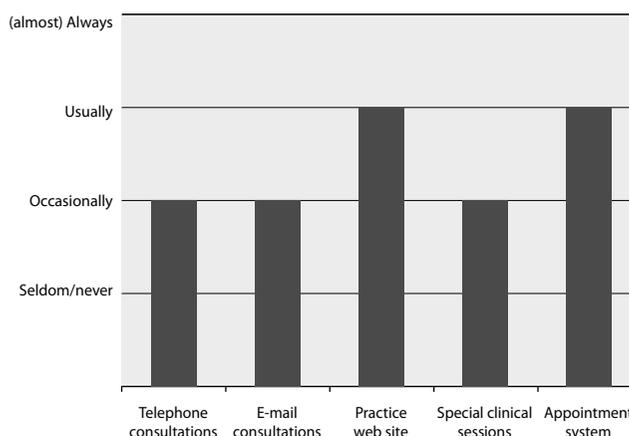


### 3. Primary care process

#### 3.1 Access to primary care services

The average density of Lithuanian GPs per 100 000 population is 52.6 (Eurostat, 2011), with the lowest GP density (about 42 GPs per 100 000 population) in rural areas. Shortages of GPs exist in some regions, according to national norms. General practices or primary care centres are obliged to have a minimum number of opening hours, depending on municipality administration rules (minimum is 6 hours). The average number of home visits per practitioner is 10 visits per week. Hospital emergency departments usually provide primary care by taking care of health problems outside office hours. The costs of the following individual health care services are covered from the budget of the Compulsory Health Insurance Fund: preventive medical assistance, medical assistance, medical rehabilitation, nursing care, social services attributed to individual health care and individual health examinations. About 80% of patients find it easy to reach and gain access to GPs, while 10% of patients rate general practice care as not very or not at all affordable (Ministry of Health, 2005b, 2010). General practices usually have a practice web site and an appointment system (see Fig. A17.3).

**Fig. A17.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



#### 3.2 Continuity of primary care services

Lithuanian GPs have a patient list system, with an average population size per GP of 1550 patients. All GPs routinely keep clinical records for all patient contacts and 29% of GPs report having access to a computer in the consulting room (2007). GPs always use referral

**Table A17.2:** GPs' involvement in delivery of various primary care services\*

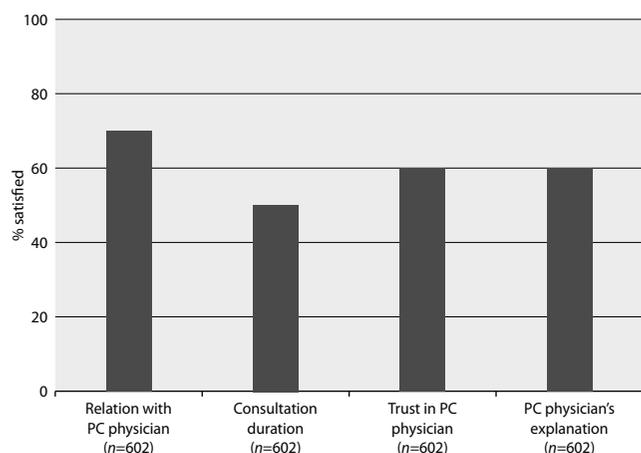
<b>GPs' estimated involvement in the provision of:</b>	<b>GPs are "always" involved in the provision of care regarding:</b>	<b>GPs are "seldom or never" involved in the provision of care regarding:</b>
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Women aged 18 asking for oral contraception</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Woman aged 35 with psychosocial problems</li> <li>• Woman aged 50 with a lump in her chest</li> <li>• Man aged 28 with a first convulsion</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Cancer (in need of palliative care)</li> <li>• Patients admitted to a nursing home/convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Wound suturing</li> <li>• Setting up an intravenous infusion</li> </ul>	–
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Allergy vaccinations</li> <li>• Testing for sexually transmitted diseases</li> <li>• Screening for HIV/AIDS</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> <li>• Cholesterol level checking</li> </ul>	–
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> <li>• Counselling in case of problematic alcohol consumption</li> </ul>	–

Note:

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

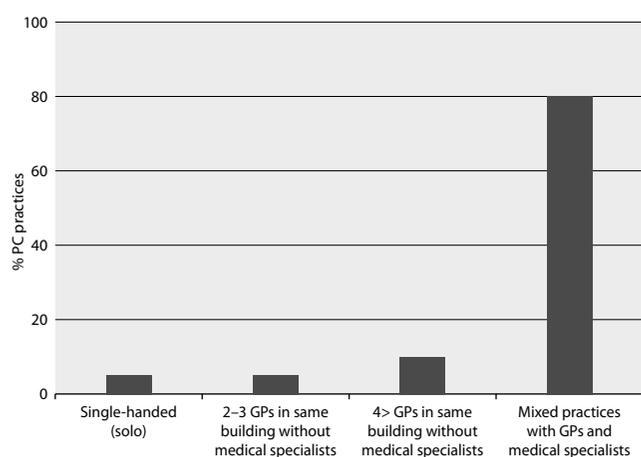
letters (including relevant information on diagnostics and treatment performed) when they refer to a medical specialist. Primary care practices only occasionally receive information within 24 hours about contacts that patients have with out-of-hours services, while specialists usually communicate back to a referring GP after an episode of treatment. In Lithuania patients are free to choose both the primary care centre and GP they want to register with (Ministry of Health, 2005a, 2005c, 2010). Satisfaction with general practice care is highest for the relation

between GP and patient (almost 70% of the patients are satisfied) and lowest with duration of the consultation (about half of patients are satisfied, see Fig. A17.4).

**Fig. A17.4:** Patient satisfaction with aspects of care provision

### 3.3 Coordination of primary care services

In 1996–1997 operational service standards for GPs were defined to include new tasks to deliver paediatrics, gynaecology and many other services as primary health care. An existing partial gatekeeping role for family doctors established in 1998 was switched to complete gatekeeping in 2002. This new role increased workload and responsibilities for Lithuanian GPs, whose primary role today continues to be in diagnosis and ongoing management of medical conditions, with consultations accounting for about 50% of their workload (Ministry of Health, 2005a, 2005b, 2005c). Most GPs work in combined practices together with medical specialists (see Fig. A17.5).

**Fig. A17.5:** Shared practice

### 3.4 Comprehensiveness of primary care services

Patients with the whole range of health problems visit a GP for first-contact care (see Table A17.2). For example, this may be a child with severe cough, a woman aged 20

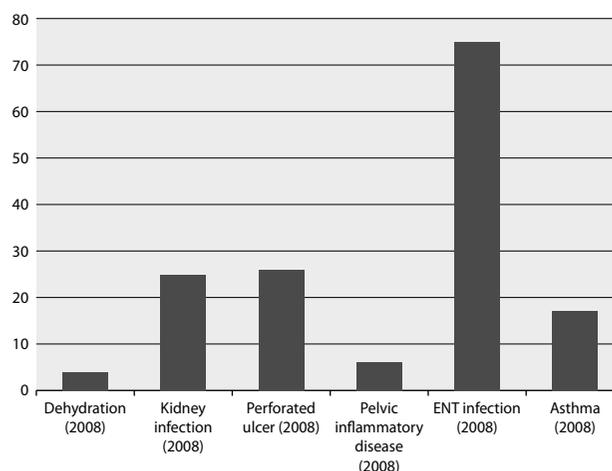
for confirmation of pregnancy or irregular menstruation, or a man with a first convulsion. Around 70% of total patient contacts are handled solely by GPs without referrals to other providers. GPs carry out preventive activities such as immunization for tetanus, testing for sexually transmitted diseases, screening for HIV/AIDS, influenza vaccination for high-risk groups and cervical cancer and breast cancer screening. GPs provide individual health counselling and they are usually involved in groupwise health education for their patients.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

The average number of prescriptions annually provided by GPs in 2008 was 980 per 1000 contacts (3400 per 1000 registered patients). More than 95% of Lithuanian infants are vaccinated against diphtheria, tetanus, pertussis, measles, hepatitis B, mumps and rubella. Of the adult population, 10% aged 60+ are vaccinated against flu, 30% of women aged 52–69 years had at least one mammogram in the past three years and 44% of women aged 21–64 years had at least one cervical cytology test in the past three years (Ministry of Health, 2005b, 2010).

The number of hospital admissions for cases with primary care sensitive diseases are shown in Figure 6.

**Fig. A17.6:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year

### 4.2 Efficiency of primary care

In Lithuania the number of home visits is 10% of all contacts between GPs and patients (2008) and the

number of telephone consultations is 1% of all contacts between GP and patients. The average number of general practice consultations per capita per year is five (Ministry of Health, 2005b, 2010) and the average consultation length (in minutes) of GPs is 15 minutes.

## Conclusion

The changes of recent decades have made primary care in Lithuania stronger. There is a strong legislative support for restructuring primary care, and education of GPs, introducing patient lists and the gatekeeping system are the steps that have facilitated the reforms most. However, there are still a large number of primary care units that continue the old-style practice of non-comprehensive primary care. Thus the full implementation of the chosen primary care-based model requires continued efforts.

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# 18 Luxembourg

*D.S. Kringos, M. Aubart, J. Leners, R. Stein*

## 1. The context of primary care

### Country and population

Luxembourg is a small country in western Europe. It covers an area of 2586 km<sup>2</sup> with a mean density of 194/km<sup>2</sup>. Luxembourg has 502 100 inhabitants in total, of whom 285 700 are Luxembourgers, which means that 43.1% of the total population living in Luxembourg are foreigners (in 2010). On 1 January 2010, 14% of the population were 65 years or older, 68.3% were of working age (15–64 years), and 17.7% were children, aged 0–14 years.

Geographically the country is divided into two regions: the “Oesling” in the north with a lower density (32%) of population and the “good country” in the south, which is more industrial and contains the most populated (68%) municipalities. The administration of the country is divided between 3 districts, 12 cantons and 116 municipalities. The administrative languages are French, German and Luxembourgish (STATEC, 2010).

### Development and economy

Luxembourg is a representative democracy in the form of a constitutional monarchy. The chief of state is HRH Grand Duke Henri. The government is represented by a Parliament headed by a Prime Minister.

Luxembourg has the highest GDP per capita of the EU; it is estimated at PPP\$ 62 119 in the year 2008 (OECD, 2009). This is partly due to the elevated percentage

**Table A18.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Luxembourg	EU <sup>1</sup>	Luxembourg	EU <sup>1</sup>	Luxembourg	EU <sup>1</sup>	Luxembourg	EU <sup>1</sup>	Luxembourg	EU
1995	5.6	7.6	1906	1275.9	n.a.	740.9	223.1	292.7	35.4	27.5 <sup>6</sup>
2000	5.8	7.9	2557	1608.0	n.a.	669.0	213.9	295.1	29.7	28.3 <sup>5</sup>
2005	7.7	8.5	4021	2150.9	578.5	604.6	240.8	316.0	28.5	26.3 <sup>4</sup>
2009	n.a.	8.8	n.a.	2788.2	556.8 <sup>4</sup>	564.8	284.4 <sup>5</sup>	321.6	28.7 <sup>5</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Luxembourg	EU <sup>2</sup>	Luxembourg	EU <sup>1</sup>	Luxembourg	EU <sup>1</sup>	Luxembourg	EU <sup>1</sup>
1995	1096.6	575.1	15.3	12.5	n.a.	15.7	2.9 <sup>6</sup>	6.6
2000	734.3	655.9	n.a.	10.3	n.a.	17.7	n.a.	6.8
2005	692.7	682.7	n.a.	9.5	n.a.	16.2	n.a.	6.8
2009	n.a.	745.5	n.a.	8.8	n.a.	15.6	n.a.	6.9

Sources: EU and Luxembourg average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: 1 Years: 1992, 1997, 2002, 2007. 2 Years: 1991, 1996, 2001, 2006. 3 Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. 4 Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. 5 Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. 6 Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. 4 Year: 2008. 5 Year: 2007. 6 Year: 1996.

of cross-border workers who contribute to the GDP but are not residents of Luxembourg (Eurostat, 2010). Luxembourg is ranked 24th on the Human Development Index with 0.852 (UNDP, 2010). The unemployment rate in 2009 was 5.9%, and by October 2010 it had grown to 6.1%.

#### Population's health

The total life expectancy at birth was 81 years in 2008 (World Bank, 2010). Life expectancy in 2005–2007 was 77.6 years for males and 82.7 years for females. In 2009, there were 11.3 births per 1000 inhabitants (9.5 births per 1000 Luxembourgers and 13.7 births per 1000 foreigners). The total fertility rate was 1.59 in 2009 (STATEC, 2010). The infant mortality was 1.82 per 1000 live births in 2007; 3.82 children per 1000 were born dead in 2007 (STATEC, 2010).

In 2007, the most frequent causes of death were cardiac diseases, cerebrovascular diseases and cancers (digestive and respiratory system) (STATEC, 2010; Ministère de la Santé, 2007). Death from cancers was more frequent in males (570 males vs. 470 females), whereas diseases of the circulatory system were a predominant cause of

death among females (781 females vs. 613 males) in 2007. These diseases are followed by chronic respiratory diseases (122) and external causes of death (270).

The primary cause of hospitalization for men is cancer whereas for women it is arthropathic diseases. Together with cardiovascular diseases these two represent 17.1% of all hospital admissions (IGSS, 2008).

#### Characteristics of the health care system

Table A18.1 shows that Luxembourg has the highest expenditure per capita on health care of all EU countries. Health care is funded by compulsory health care insurance, additional voluntary insurance and co-payments. Health insurance is compulsory for working people, their relatives and children, and therefore provides nearly full coverage of the whole population. A shortage of nurses is a relatively small problem in Luxembourg as the number of nurses relative to the population is around two-thirds higher than the average of EU15 countries (OECD, 2008). The picture is reversed with regard to physicians. In 2008, density of physicians (excluding dentists) was 3.1 per 1000 habitants with a proportion of two-thirds specialists and one-third

GPs (STATEC, 2010). Patients have free access to every specialist and, as reimbursement of the costs is good, consumption is quite high.

Considering hospital stay, the mean duration of stay is diminishing in recent years due to ambulatory surgery. In 2008, 69.3% of the patients had a stay of four or fewer days in hospital and 81.5% stayed fewer than seven days.

Since 2003 costs for pharmaceutical prescriptions have risen constantly at a rate of about 4.4% a year. In 2008 pharmaceutical costs were €154.5 million and were 5.9% higher than in 2007 (IGSS, 2008).

## 2. Structure of the primary care system

### 2.1 Primary care governance

Primary care in Luxembourg has not been defined with explicit goals. No policy documents have been issued by government or important stakeholders that reflect a clear vision on current and future primary care. As a result, for example, no policy measures have been implemented to regulate and assure an equal distribution of primary care providers and facilities. This lack of focus on primary care is also reflected in the absence of a primary care unit within the Ministry of Health and within the body for the state inspection of health care, as well as in the lack of a specific budget for primary care that can be distinguished from other sectors.

The medical association, the Association des Médecins et Médecins Dentistes (AMMD) defends the interests of the medical and dental professions in relation to the sickness funds and the government. As this organization represents the doctors working in primary care as well, it also defends pay and conditions and promotes the development of concrete projects in primary care. In addition, the professional association for GPs, the Cercle des Médecins Généralistes (CMG) is an important promoter of any professional projects in general practice.

On a more scientific level, the Société Scientifique Luxembourgeoise de Médecine Générale (SSLMG) is the association that initiates, promotes and sustains scientific projects, research in general practice, and postgraduate training. Most of its members are teachers in the vocational training of general practice at the University of Luxembourg. The Association Luxembourgeoise pour la Formation Médicale Continue (ALFORMEC)

is the organization responsible for continuing medical education in general practice. It is funded by pharmaceutical industry, the Ministry of Health and by the fees of its members.

Physicians can work in primary care after they have completed postgraduate training, either in Luxembourg or in another member state of the EU. Continuing medical education is only a deontological obligation, and not mandatory for other primary care providers such as GPs (Ministère de la Santé, 2004). There are no formal requirements for starting and running a primary care facility or practice.

As a voluntary mechanism to maintain and improve the quality of care, the independent scientific organization called the Conseil Scientifique was created by a governmental regulation in 2005. It aims to elaborate and communicate recommendations concerning good medical practice in health care (not specifically for primary care). The Conseil Scientifique has developed guidelines for the prescription of antibiotics, medical imaging and laboratory tests, primary prevention of cardiovascular diseases, and guidelines for oncology. The guidelines specifically produced for use by GPs were either adapted from foreign guidelines or developed by medical specialists.

Another important measure to maintain and improve quality of care is provided by ALFORMEC, which offers continuing medical education training specifically aimed at GPs (ALFORMEC, 2010; Conseil Scientifique, 2010).

Informed consent by patients has not been regulated by law. Other patient rights, such as patient access to their own medical files, confidential use of medical records, and the availability of complaint procedures in primary care facilities have been secured by law.

### 2.2 Economic conditions of primary care

There are no official statistics available for the total expenditure on primary care. It is only known that 1.1% of the total health expenditure is spent on prevention and public health (OECD, 2009).

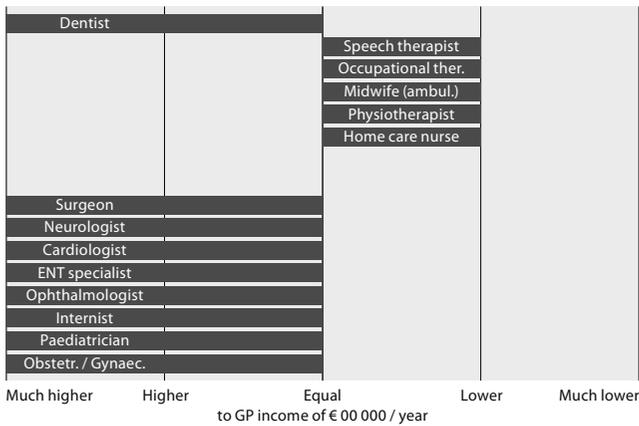
Health insurance is compulsory for those who are working, retired, receiving alternative payment or minimal revenue or those being paid as unemployed people. As a result it is estimated that 97.9% of the

population is covered for medical expenditures (including primary care), either directly (68.3%) or via a family member (Caisse Nationale de Santé, 2009; IGSS, 2009).

Health insurance reimburses 90% of the costs of patient visits to a GP or medical specialist. The reimbursement for home visits is 80%. The co-payment for medicines prescribed in primary care varies greatly, depending on the type of medication. Medicines for chronic diseases are often fully reimbursed (Caisse Nationale de Santé, 2010: Arts 34–38).

Almost all GPs (90%) are self-employed with a contract to health insurance fund(s) or health authority, receiving a fee-for-service payment. Only 10% are salaried employed, working either for a health insurance company, the Ministry of Health or a community-driven hospital. Salaried employed GPs receive a flat salary. In 2006, the average annual income of a self-employed GP was PPP\$ 128 875 (€115 987), and of a salaried GP PPP\$ 107 558 (€96 802). Fig. A18.1 shows big differences in the average income between a mid-career GP and medical specialists, who have much higher incomes. All allied health care and nursing professions have lower incomes than GPs.

**Fig. A18.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP

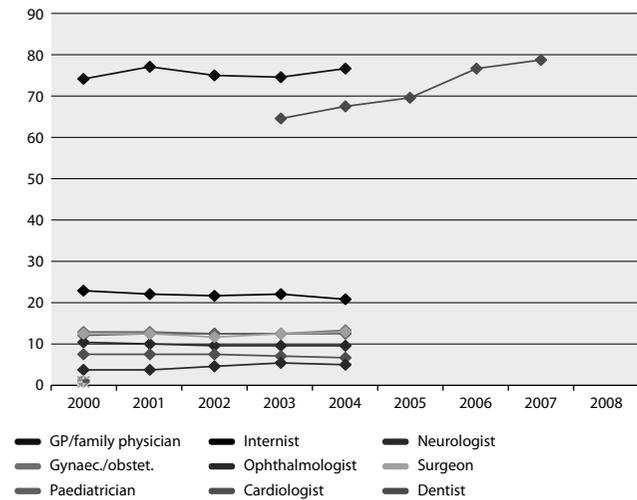


2.3 Primary care workforce development

Patients can directly access a GP, or any medical specialist, for primary care or specialized services. Therefore primary care is provided by GPs, dentists, gynaecologists/obstetricians, paediatricians, specialists of internal medicine, ophthalmologists, ENT specialists, cardiologists, neurologists and surgeons. Patients do need a referral to access nurses and midwives. Fig. A18.2 shows a small increase in supply over a five-year time period

for GPs, gynaecologists/obstetricians, paediatricians, ENT specialists, neurologists, and surgeons. The biggest increase in supply occurred among dentists. The development of supply of internists, ophthalmologists and cardiologists shows a negative trend (Eurostat, 2009; OECD, 2009).

**Fig. A18.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



According to national statistics, in 2008 30% of active physicians were GPs, and 70% medical specialists (IGSS, 2009). There are no recent public data available on primary care workforce capacity needs and development in the future.

The age distribution of GPs shows that 8% are younger than 35 years, 22% between 35 and 45 years, 38% between 45 and 55 years, and 32% older than 55 years.

There is no medical faculty with a complete basic medical training in Luxembourg or with an undergraduate training in general practice. The University of Luxembourg offers a postgraduate training in general practice which was first introduced in 2004. The number of participants has increased from 14 in 2005–2006 to 37 in 2007–2008. After completion of the three-year training (including theory and practice training) students obtain a certified EU training diploma in general practice (Ministère de la Santé, 2004). The tasks and duties of GPs have formally been described in the Code de Déontologie Médicale (Ordre National des Médecins, 2005).

**Table A18.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Woman aged 35 with psychosocial problems</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	<ul style="list-style-type: none"> <li>• Man aged 28 with a first convulsion</li> </ul>
<i>Treatment and follow-up of diseases</i> (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Mild depression</li> <li>• Patients admitted to a nursing home/convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from cornea</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> <li>• Family planning/contraceptive care</li> </ul>	<ul style="list-style-type: none"> <li>• Routine antenatal care</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> </ul>	<ul style="list-style-type: none"> <li>• Groupwise health education</li> </ul>

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

A professional training specifically for district or community nurses, or primary care nurses, does not exist. Most of the GPs in Luxembourg do not employ a nurse in their practice.

There is no journal on general practice published in Luxembourg.

### 3. Primary care process

#### 3.1 Access to primary care services

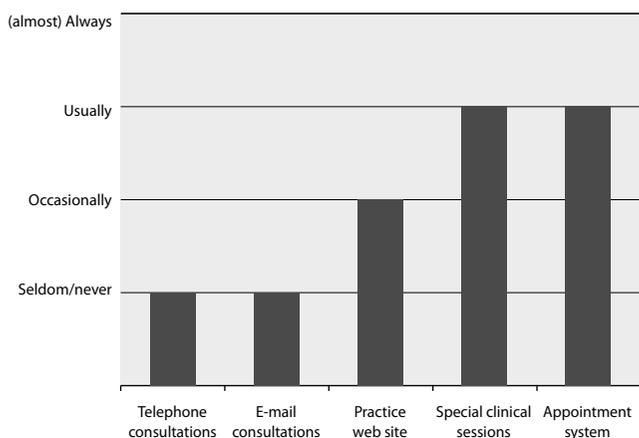
Although the density of GPs is a bit lower in the rural region in the north of the country, it is estimated that GPs are well distributed among cities and villages. However, there are no official statistics on the variation in supply between cantons. National norms of targeted density of GPs do not exist, nor are there standardized procedures of workforce capacity planning. A major concern is that more than a third of the GPs will reach the retirement age within the next 10 years, which will put the accessibility of care under pressure.

In 2008, there were in total 89 pharmacies distributed through the country. A fixed number of inhabitants is required in a given area in order to allow a new pharmacy to be established (IGSS, 2009).

A survey in 2007 showed that overall, 89% of patients find it easy to reach and gain access to GPs (European Commission, 2007). Primary care practices are not legally bound to a minimum number of opening hours. They usually use an appointment system and offer special clinical sessions (see Fig. A18.3). Practices rarely use e-mail consultations (2.7% of GPs in 2007), or consult patients over the phone. Primary care practices occasionally have a practice web site (Dobrev et al., 2008).

An average work week of a GP is around 60 hours. An average consultation with a GP takes 15–20 minutes. The number of home visits differs quite a lot between GPs. Younger GPs provide fewer home visits than older colleagues. Between urban and rural areas, the number of home visits performed by GPs can vary between 1 and 20 visits per week.

**Fig. A18.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



After-hours care provision is organized mainly around two modes. Hospital emergency departments provide primary care by taking care of health problems after office hours. Second, since December 2008 walk-in centres have been available for face-to-face contact with a GP after office hours. These centres are open every evening from 8.00 p.m. to midnight, and on Saturdays, Sundays and holidays. Between midnight and 7.00 a.m. GPs are on duty for phone services and house visits (Government of Luxembourg, 2008).

Given the minor co-payments, the affordability of primary care for patients is not a real issue. A survey in 2007 showed that only 4% of the population in 2007 rated general practice care not affordable (European Commission, 2007).

### 3.2 Continuity of primary care services

GPs do not have a patient list system. Patients have a free choice of doctor, and can change their GP any time they want. There is no official data available about the stability of doctor–patient relations and patient satisfaction about the quality of their relation with primary care providers. Generally, patients consider a certain GP as their primary medical care consultant, except for very specific diseases for which they directly visit a specialist. It is estimated that a GP is responsible for about 500 patients per month.

GPs are obliged by law to keep medical records for all patient contacts (Ordre National des Médecins, 2005). They usually (72% in 2007) have a computer at their disposal in their office which they use for their financial administration, prescription of medicines and for keeping medical records. GPs do not commonly use

their computer to interact with other care providers or pharmacies, to book appointments or to search for medical information on the internet (Dobrev et al., 2008). The functionalities of the computer (for instance being able to generate lists of patients) depend on the software that is used.

Referral letters are usually used by GPs to refer a patient to a medical specialist. After an episode of treatment, medical specialists usually write a brief medical assessment and treatment discharge letter; these are often brought by patients to GPs.

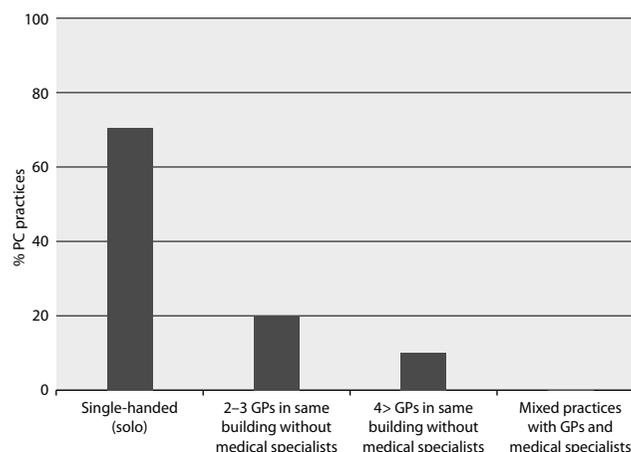
There is no direct procedure for informing GPs within 24 hours about contacts that patients have with out-of-hours services. Normally, a GP receives the information at the next visit of their patient, or earlier by letter if the patient has been hospitalized. Direct transfer of information is possible but not very common.

### 3.3 Coordination of primary care services

There is no gatekeeping system in Luxembourg. Patients can visit any GP or medical specialist directly for their health problems. Patients can also directly receive home care from a nurse, in which case they pay the costs out of pocket. Referrals from a GP or a medical specialist are only normally required for a visit to a paramedical therapist (e.g. physiotherapist, occupational therapist), specialized nurse, midwife or dentist.

The majority of general practices are single-handed practices (see Fig. A18.4). Shared practices are however becoming more and more common: 30% are group practices of two or more GPs.

**Fig. A18.4:** Shared practice



Partly as a result of the predominance of single-handed general practices, GPs only occasionally have face-to-face meetings with their GP colleagues, and only seldom collaborate with practice nurses, midwives or community mental health workers. They more frequently meet with home care nurses, social workers and primary care physiotherapists, and cooperate with pharmacies mostly by phone. Task substitution does not exist in primary care. For example, nurse-led clinics within primary care, for example for patients with diabetes, or to provide health education, do not take place. Health education for patients is mostly provided by patient associations.

Among group practices it is more usual to organize monthly meetings to discuss clinical cases with specialists and other providers, and to provide continuing medical education. Joint consultation among specialists and GPs however does not occur. The habit of asking advice from medical specialists is very individual and depends on the skills of the GP, his or her habits of working and the geographical situation of the office. Generally it is not uncommon to ask advice from a specialist.

### 3.3 Comprehensiveness of primary care services

Primary care is provided by a range of medical specialists in addition to GPs. This limited role of GPs is clearly shown by Table A18.2. As a result, GPs are not necessarily always the point of first-contact care for all new health problems. For most new health problems patients usually or occasionally visit a GP. This is also the case for treatment and follow-up care of diseases, and the provision of medical technical procedures. There are no official statistics available of the percentage of total patient contacts handled solely by GPs without referrals to other providers. GPs are often involved in the provision of preventive care (not for children) and less so in health promotion activities.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

In 2008, 12.9% of the total expenditures on health care are spent on medicines prescribed within primary care. This percentage increased by 5.8% over one year. Of the prescribed medicines, 69% are fully reimbursed, 26% are reimbursed up to 80%, and 5% are reimbursed up to 40% (IGSS, 2009). About 27.3 DDD/1000 inhabitants/day of antibiotics were prescribed by ambulatory physicians in 2007 (ESAC, 2009).

Very little information is available that provides an indication of the quality of care provided for common primary care conditions. Concerning diabetes care, it is known that, in 2008, 48% of the diabetic population had an HbA1C level higher than 7.0% (Cebolla & Bjornberg, 2008).

In 1999, 2135 per 100 000 inhabitants were hospitalized because of a disease of the respiratory system (Ministère de la Santé, 2006).

Infant vaccination rates within primary care are generally around 96% (Ministère de la Santé, 2009). Nevertheless, the provision of preventive care can clearly be improved, as influenza vaccinations of the population aged 60 or older are relatively low, at 42% in 2001, and up to 55% in 2007. Even though Luxembourg has had a national breast cancer screening programme since 1992, in which women aged 50–69 years receive biannual invitations, in 2008 only 64.5% of the target population received a mammography (OECD, 2009; Schopper & De Wolf, 2007; Von Karsa et al., 2007). The screening rates for cervical cancer are even lower: 49.3% of women aged 20–69 years received a Pap smear test in 2008 (Linós & Riza, 2000; OECD, 2009).

### 4.2 Efficiency of primary care

There are no official statistics available that give an indication of the efficiency of primary care.

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# 19 Malta

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## 1. The context of primary care

### Country and population

Malta is the smallest country in the EU25 (315 km<sup>2</sup>), principally consisting of three inhabited islands: Malta (the largest), Gozo and Comino. Malta became a Republic in 1974 (Azzopardi Muscat & Dixon, 1999; Pace Asciaq, Camilleri & Azzopardi Muscat, 2002) and a member of the EU in 2004. Malta's population is estimated at around 405 200 (Pirjol, 2010). The proportion of the population aged 0–14 years fell from 19% in 2002 to 15.4% in 2008 and the proportion of the population aged 65 years and over is in 2008 around 14.4% (WHO Regional Office for Europe, 2010a).

### Development and economy

Malta is divided into 68 local council districts where elections for local councils are held every three years. The national government is responsible for providing health care services. The Maltese Parliament is unicameral. A steady increase in GDP and health expenditure as a percentage of GDP has been observed in Malta, with GDP per capita of US\$ 13 256 in 2004 (Pirjol, 2010). Total expenditure on health as a proportion of GDP was 8.5% in 2005. Between 1985 and 2007 Malta's Human Development Index rose by 0.50% annually and from 0.809 to 0.902 in 2009. Malta has been ranked 34th out of 175 United Nations countries according to HDI (UNDP, 2010). The 6828 registered unemployed people

**Table A19.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Physicians (per 100 000 population)		GPs as % of all physicians		Nurses (per 100 000 population)	
	Malta	EU <sup>1</sup>	Malta	EU <sup>1</sup>	Malta	EU <sup>1</sup>	Malta	EU <sup>1</sup>	Malta	EU
1995	n.a.	7.6	n.a.	1275.9	n.a.	292.7	n.a.	27.5 <sup>6</sup>	n.a.	575.1
2000	8.0	7.9	3405	1608.0	n.a.	295.1	n.a.	28.3 <sup>5</sup>	n.a.	655.9
2005	8.5	8.5	4105	2150.9	n.a.	316.0	n.a.	26.3 <sup>4</sup>	n.a.	682.7
2009	7.7 <sup>7</sup>	8.8	4127 <sup>7</sup>	2788.2	304.1	321.6	22.8	25.5 <sup>3</sup>	619.4	745.5

	Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Malta	EU <sup>2</sup>	Malta	EU <sup>1</sup>	Malta	EU <sup>1</sup>
1995	n.a.	12.5	n.a.	15.7	n.a.	6.6
2000	n.a.	10.3	11.2	17.7	2.5	6.8
2005	n.a.	9.5	11.0	16.2	2.6	6.8
2009	6.5	8.8	11.5	15.6	2.5	6.9

Sources: EU and Malta average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008.

in July 2010 decreased by 693 when compared to the corresponding month in 2009 (National Statistics Office Malta, 2010).

The adult illiteracy rate for the population aged 15 years and over in the year 2000 was 8% of the total population (Pace Ascjak, Camilleri & Azzopardi Muscat, 2002). Based on 1995 census data, an estimated 50% of men and 44% of women have completed at least the secondary level of education (Pace Ascjak, Camilleri & Azzopardi Muscat, 2002).

#### Population's health

Life expectancy in males is 77 years and 82 years in females (2008). During the year 2008 there were 47 perinatal deaths reported to the National Mortality Registry, consisting of 26 fetal deaths and 21 early neonatal deaths. There were 34 infant deaths. These deaths do not include fetal deaths weighing less than 500 g. During the year 2008 there were 3243 deaths in residents: 1668 male deaths and 1575 female deaths. There has been a downward trend in mortality rate in Malta in the past 10 years. This trend is also reflected in mortality rates in those aged less than 65 years. The standardized mortality rate (SMR) in Malta is comparable to that of the EU15 (countries that joined the

EU before May 2004) and lower than that of the new EU member states. Deaths due to diseases of the circulatory system, namely ischaemic heart disease, stroke and heart failure, are the leading causes of death accounting for 40% of all deaths. Despite a downward trend in mortality rates from ischaemic heart disease, rates are higher than the EU15 average. Diabetes mellitus is an important risk factor for ischaemic heart disease, and accounts for nearly 5% of all deaths. Neoplasms are the next commonest cause of death, accounting for 26% of all deaths. While the overall number of deaths is increasing, Malta's SMR compares well with the EU15 and is better than that of the EU12 (i.e. the countries that were members in 1986) in all age groups and in those aged less than 65 years. However the average age at death due to neoplasms is 70 years, much younger than that for circulatory diseases. There were 298 deaths due to respiratory conditions accounting for 9.2% of all deaths. Mortality rates from traffic accidents and suicides show a predominance in the younger age groups but Malta fares better than both the EU15 and EU12 in this respect (Department of Health Information and Research, 2008).

There are 10.2 births/1000 population. The natural population growth rate has been declining, mainly because the crude birth rate is falling. There has also

been a concomitant decrease in the total fertility rate to 1.5 in 2001 (Pace Asciak, Camilleri & Azzopardi Muscat, 2002).

In 2007 the rate of acute care hospital admissions was 10.7%, which is below EU15 level (European Hospital and Healthcare Federation, 2009).

#### Characteristics of the health care system

The health system in Malta is characterized by highly centralized structures. General taxation provides the main source of health care funding but the general trend until recently has been towards increasing the private share under the form of voluntary premiums or user charges. In Malta, due to the small size of the health market, the production of some highly specialized services is not financially viable. Consequently the Maltese government funds overseas treatment for conditions necessitating such highly specialized care (McKee, MacLehose & Nolte, 2004). The hospital sector dominates the health expenditure of the nation and absorbs the major part of the health budget. In Malta the number of hospital beds almost doubled after 2004. The total number of hospital beds in 2001 was 1950 and 3192 in 2007, which represents 63.7% difference (European Hospital and Healthcare Federation, 2009).

While health care practitioners in Malta are allowed to exercise their profession in both public and private health care services, the government of Malta is not responsible in any way for any treatment or care given to EU citizens in private hospitals or health centres, or by practitioners of any sort in their private capacity. Health care in public services is generally free at the point of use. A patient may access public health care services directly on presentation of the health card. The patient will have to pay for the cost of any prosthesis and any follow-up prescribed medication, excluding medication prescribed for the first three days after discharge from hospital. Only acute emergency dental care is offered free of charge in hospital outpatient and health centres, and to a limited extent. Most dental care is provided in private dental clinics at the patient's own expense. All drugs used in inpatient treatment and for the first three days after discharge are free of charge for the patient. Otherwise, prescribed drugs must be paid for in full.

Primary care is provided by the state health services and by private family physicians. These two primary care systems function independently of one another.

It has been estimated that the private sector accounts for about two-thirds of the workload in primary care. Of respondents to a recent population survey, 80% confirmed that they use a private family doctor as their primary provider of health care (Soler et al., 2009). The state-run primary care system covers family medicine, community care, immunization and the school health service. These services are mainly delivered and coordinated from eight government health centres that cover an extensive range of preventive, curative and rehabilitative services (Ministry of Health the Elderly and Community Care, 2008). There are company doctors working in Malta as well. Company doctors are hired by companies mainly to verify the illness of employees who report sick by visiting them at home. The role of company doctors is mainly verification of sickness, since in Malta a sick leave certificate is mandatory from the first day of absence. Increasingly, the role of company doctors involves important involvement in occupational medicine and health and safety at the workplace. Company doctors are an important provider of primary medical care for employees who report sick from work. Services in the private sector are open to all those who can afford to pay the fees, and also to a growing sector of the population which has private health insurance (Sammut, 2000).

Table A19.1 compares the development of health resources and utilization in Malta with the EU averages.

## 2. Structure of the primary care system

### 2.1 Primary care governance

In 2003, with Malta's entry into the EU and a reform of the health care professions act, Family Medicine became a separate medical speciality (Malta College of Family Doctors, 2006).

The first government health centres were established in 1979. Today family physician services in Malta are provided by about 150 full-time equivalent family physicians, who work in private practice and 57 full-time equivalent family physicians, who work in government practice (2009). There is no patient registration in Malta and family physicians have no formal patient lists. Eighty per cent of patients report that they have one private family doctor as their main primary care provider. Only 4% report that a health centre doctor is their first provider of choice, but 13% report using various doctors depending on the particular need (Soler

et al., 2009; Sciortino, 2010). The publicly employed family physicians have a limited gatekeeping role. For instance, patients can bypass the family physician and visit a specialist or other health providers without referral. In addition, the family practice services are limited. For instance, a community-based internal medicine specialist checks out the range of chronic diseases, and family physicians have limited prescribing rights as against other specialists. The publicly funded family physicians are usually visited free of charge in emergency situations or for routine cases, while for most difficult situations patients seek the help of the private family physicians or specialists (Department of Health Information and Research Strategy and Sustainability Division MfSP, 2010).

## 2.2 Economic conditions of primary care

There are no official statistics available regarding the total expenditure on primary care. The hospital sector dominates the health expenditure of the nation and absorbs a major part of the health budget. Over the years it has grown incrementally to accommodate increased demand and developments in technology. A precise estimate of the proportion spent on primary care is difficult to make as secondary care physicians on a part-time basis provide certain services at health centres. Resource allocation is carried out by the Ministry of Finance, the Ministry for Health and its four subsidiary divisions responsible for Health Care Services, Public Health Regulation, Resources and Support, and Strategy and Sustainability. Total expenditure on health as a percentage of GDP was 7.7% in 2008 (see Table A19.1).

In Malta, the government provides a comprehensive free health service to all residents. This health service is funded from general taxation. All residents have access to preventive, investigative, curative and rehabilitative services in government health centres and hospitals (Exposure jobs, 2010). Providers in health centres are paid by salary. Annual earnings of a private family physician range from €25 000 to €75 000. Few family doctors would earn more than €50 000 a year, but some (a very small minority) would earn more than €60 000. Annual earnings of hospital doctors are different in different private hospitals/practices or specialist consultancy services (Reed Specialist Recruitment, 2009). There are no data available comparing the incomes between primary and secondary care providers.

## 2.3 Primary care workforce development

Family physicians work exclusively in primary care. Specialist training in family medicine in Malta takes place under the auspices of the government's Primary Health Department, with the Malta College of Family Doctors responsible for ensuring the quality of academic training and assessment. As a result of Malta's accession to the EU in 2004, family medicine was accepted as a specialty and a three-year "Specialist Training Programme in Family Medicine – Malta" was drawn up by the Malta College of Family Doctors (MCFD) in 2005 and approved by the Ministry of Health's Specialist Accreditation Committee in 2006 (Sammut et al., 2006). The "Curriculum for Specialist Training in Family Medicine for Malta" was published in 2009 by the MCFD's Curriculum Board. The programme comprised 29 family physician trainees in 2010: 12 who entered the programme in 2008, 6 in 2009 and another 11 in 2010. In 2010 the first cohort of 11 trainees has undertaken the summative examination at the end of specialist training, which is being delivered by the MCFD with the collaboration of the UK Royal College of Family Physicians.

The Health Care Services Standards Directorate (DHCSS) was established in September 2007. This is a new Directorate within the Department of Public Health Regulation. The licensing process which was previously within the remit of the Department of Institutional Health is now part of the responsibility of DHCSS but its breadth and scope have expanded with the added responsibilities specific to this new regulatory Directorate's portfolio. The principal purpose of the DHCSS is to achieve improvement in the quality of care and ensure patient safety through regulation. To achieve the main objective of improving health care services in the Maltese islands, the DHCSS formulates and recommends national standards for hospital services, homes for older people and community care with the active participation of the relevant stakeholders and interested parties. It promotes a quality and patient safety culture within public and private service providers, inspects and licences hospital services, clinics, community and primary care services, homes for older people, blood establishments, hospital blood banks and tissue establishments. The DHCSS also monitors hospital and medical services' clinical performance and outcome indicators as part of the health care licensing and regulatory mechanisms, and enforces health care laws and regulation through advice, education, persuasion and legal action if necessary

The total number of doctors registered in Malta is around 1150. This includes 60 foreign physicians/surgeons engaged by the government to occupy certain posts within the Department of Health. Eighty-one per cent of listed doctors are males and 19 per cent are females. One thousand and twenty doctors are registered as Malta residents and 130 as overseas residents. Out of the 1020 doctors in Malta, 560 are employed by the government (Sciortino, 2010). The rest are either in private practice or retired.

The Medical Association of Malta has warned that doctors are finding it increasingly difficult to cope with a growing demand for their services and has appealed to the authorities to be more sensitive to the needs of patients (Medical Association of Malta, 2007). There is a shortage of nurses and pharmacists as well (Ministry of Health the Elderly and Community Care, 2006) and a call was made for 200 nurses and 30 pharmacists. Most (96%) patients find it easy to reach and gain access to family physicians (TNS Opinion & Social, 2007). The Primary Health Care Department has to deal with a shortage of health care manpower, although towards the end of 2007 the nursing vacancies were all filled. There was also some improvement in the number of family physicians in 2010 when 11 family physicians trainees completed the Specialist Training Programme in Family Medicine, which they started in 2007. This intake of about a dozen trainees a year is expected to continue in the medium to long term.

### 3. Primary care process

#### 3.1 Access to primary care services

Free access to comprehensive primary care services is possible by visiting a health centre. The health centres are the hub of the primary care services provided by the government. Besides the family physician and nursing services, various specialized health services are provided. These include immunization, speech therapy, dental services, antenatal and postnatal clinics, well baby clinics, diabetes clinics and paediatric clinics. At present there are eight health centres. Floriana Health Centre has two satellites, Gzira Health Centre and Qormi Health Centre. Paola Health Centre has one satellite, Cospicua Health Centre. Mosta Health Centre has one satellite, Rabat Health Centre. The public is requested to attend the health centre that serves his/her locality of residence. The Director is responsible for the provision of services

at primary care level by organizing and coordinating all functions relating to health centres. The Director ensures the development and maintenance of an accessible, integrated continuum of primary care services. S/he plays a leading role in the development and implementation of the strategic plan for the strengthening of primary care. The Director ensures that services within the Directorate are operating in line with the Ministry's policy, strategy, regulations and standards. The Director also ensures that services are delivered according to the needs of the user and that users' rights are respected.

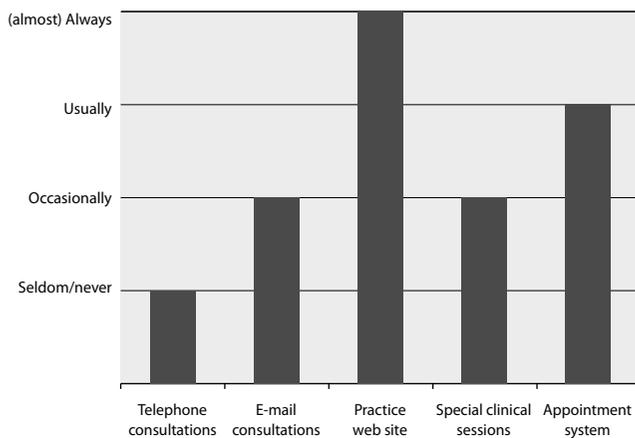
In the public service it is only possible to see a family physician, gynaecologist, podologist, speech-language pathologist, or practice and immunization nurse without a referral. For physiotherapists, optometrists, the diabetes clinic, the well baby clinic, the medical consultant and the home care nurse, a referral is required.

In the private sector, direct access for the patient is possible as the costs of the visit are paid directly to various professionals, such as the gynaecologist/obstetrician, paediatrician, specialist in internal medicine, ophthalmologist, ENT specialist, cardiologist, neurologist, surgeon, occupational therapist, physiotherapist, psychologist and speech-language pathologist.

The opening hours for health centres varies, with some opening from 08:00 to 20:00 hours with family medicine services stopping at 17:00 and limited openings at weekends, while others are open for 24 hours, with family medicine services switched over to "emergencies only" between 17:00 hours and 08:00 hours during week days and from 13:00 hours on Saturday to 08:00 hours the following Monday.

Figure A19.1 shows the extent to which patients have access to organizational arrangements in primary care practices or centres.

**Fig. A19.1:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



### 3.2 Continuity of primary care services

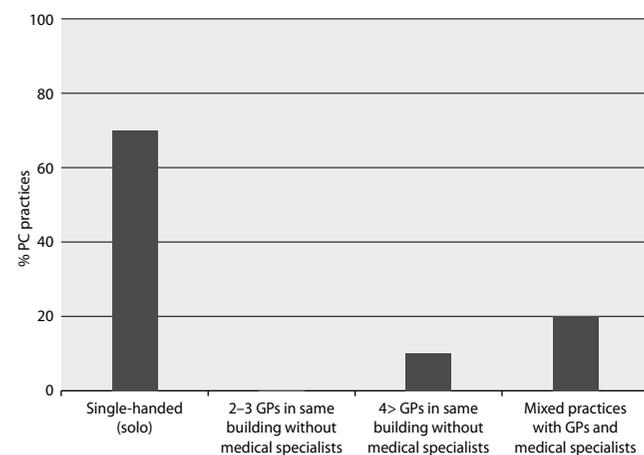
Continuity of care in the private family medicine sector is good (Soler et al., 2009). In contrast there is poor continuity of care provided by the state family doctor services. As there is no patient registration system in Malta, a client can walk into a health centre at any time to see the doctor who happens to be on duty. Moreover, as most clients attend for minor problems, entries are not always made in the health centre medical records that were introduced in 1997. Medical record keeping in private practice cannot be said to be optimal and formal registration is non-existent (Sammut, 2000). The fact that people shop around between family physicians, specialists and health centres is a fault of the system (Mallia, 2001). The main weaknesses that need to be addressed are: the lack of continuity of care, the need for a stronger doctor–patient relationship, the duplication of resources, the lack of a robust patient record and IT system, limited access by family doctors to state facilities, the lack of a multidisciplinary approach to primary care, the paucity of investment in the sector and client abuse of the system (Ministry for Social Policy (Health, Elderly and Community Care) 2009).

### 3.3 Coordination of primary care

The government's health centre system works side by side with a thriving private sector and many residents opt for the services of private family physicians and specialists who work in the primary care setting. Most people (almost 85%) have only one family doctor. This relationship was of five years or more duration in most cases (75%) (Soler et al., 2009).

Although coordination between primary care services provided by the public and private sectors is limited, private family doctors do have some access to investigative services provided by government health centres (certain blood and urine tests, ECGs and chest X-rays). Private family doctors may also refer patients for most services provided by the various clinics held in government health centres. Access to these services for private family doctors and their patients has been recently increased. Fig. A19.2 shows how primary care practices are shared between medical professionals in the private sector.

**Fig. A19.2:** Shared practice



While patients can self-refer themselves to hospital specialists working in the private sector, official referrals from public or private family physicians are required for specialist services in public hospitals. The issue of discharge letters from specialists to family physicians is mandatory following inpatient care in government hospitals; however such letters often reach the family physicians some time after the patient has been discharged.

### 3.4 Comprehensiveness of primary care services

Private family doctors are able to provide a broad range of services, including minor surgery, imaging modalities and access to private specialist services. These services have been improved by recent courses for family doctors with special interests in such areas as women's health, diagnostic ultrasound, minor surgery and others. The family medicine and nursing services are supplemented by various specialized services that include antenatal and postnatal clinics, well baby clinics, immunization clinics, gynaecology clinics, diabetes clinics, medical consultant clinics, ophthalmic clinics, psychiatric clinics, podiatric

**Table A19.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with psychosocial problems</li> <li>• Women aged 50 with a lump in her breast</li> <li>• Man aged 28 with a first convulsion</li> <li>• Man with suicidal inclinations</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Congestive heart failure</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Rheumatoid arthritis</li> <li>• Mild depression</li> <li>• Cancer (in need for palliative care)</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Minor surgery</li> </ul>	<ul style="list-style-type: none"> <li>• Insertion of IUD</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Childhood vaccination</li> </ul>	–
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Promotion a healthy diet and regular exercise</li> <li>• Smoking cessation</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

clinics, physiotherapy clinics and speech-language pathology clinics. Community nursing and midwifery services are provided by the Malta Memorial District Nursing Association (MMDNA) on a contract basis.

Table A19.2 lists examples of GPs' involvement in the delivery of various primary care services.

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

Immunization against diphtheria, tetanus and polio is obligatory. Immunization against pertussis is also offered though not obligatory. Immunization rates are

believed to be very high, although information about the number of immunizations given in private practice is incomplete. Diphtheria and polio are considered to be diseases that have been eliminated in the local population. The last recorded case of diphtheria occurred in 1969, while that of polio occurred in 1964. The continued existence of pertussis cases is the price Malta is paying for low immunization rates against this disease. Measles epidemics used to occur every four years in the Maltese islands. An intensive immunization campaign in 1989 not only aborted the expected 1990 epidemic, but also enhanced the practice of immunization against measles as a routine measure.

In the first national health interview survey in Malta (HIS) 24.9% participants answered that they have a

long-standing illness or health problem: 18.7% allergy (except asthma), 17.2% high blood pressure, 8.9% high cholesterol, 8.0% chronic bronchitis, 7.26% asthma and 7.1% diabetes mellitus. Data about how often these patients are reviewed in primary care are scarce. About 89% of asthma patients are reviewed at least once a year and 74% every six months by their family physicians (Pace Asciak et al., 2003).

#### 4.2 Efficiency of primary care

The analyses of performance of state family medicine services in 2006 shows that there were 357 100 episodes of care in health centres, 197 100 episodes in district clinics, 13 200 home visits by day and 2019 home visits by night. The total number of health centre family physician encounters in 2006 was 569 429 (Ministry of Health the Elderly and Community Care, 2006).

Patients who were asked “Thinking of the last time you consulted a Family or Health Centre or Casualty or Outpatients doctor, within the past 12 months, where or how did you consult the doctor?” answered that they consulted the doctor’s private clinic in 40.0% of attendances, private hospital/clinic in 5.76%, a health centre in 8.65%, the casualty/outpatients department in 4.55%, while 15.77% consulted the doctor through home visits and 0.7% consulted by telephone (Pace Asciak et al., 2003)

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# 20 The Netherlands

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## 1. The context of primary care

### Country and population

The Netherlands is small but its 16.5 million inhabitants make this country extremely densely populated. It has a territory of 41 526/km<sup>2</sup>, 25% of which is located below sea level, along with 21% of its population, with 50% of its land lying less than 1 m above sea level. Almost 20% of the population has foreign roots. The proportion of people over the age of 65 (pensionable age) is currently below the average in Europe but is expected to grow strongly. Between 2005 and 2030 those aged 65 years and older will increase from 14.2% to 24.1% and those 80 and older from 3.6% to 6.8% of the population (Eurostat, 2009).

### Development and economy

The Netherlands is a parliamentary democratic constitutional monarchy. It is a wealthy country with a GDP per capita significantly above the EU15 average (Eurostat, 2009). The Netherlands ranked 7th on the Human Development Index with 0.890 (UNDP, 2010). Elderly Dutch people are at lower risk of poverty than those elsewhere in Europe. Labour market participation among women is high compared to other European countries, with 69.6% between 15 and 64 being employed (Eurostat, 2009), but most women have part-time jobs.

**Table A20.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	The Netherlands	EU <sup>1</sup>	A	EU <sup>1</sup>	A	EU <sup>1</sup>	A	EU <sup>1</sup>	A	EU
1995	8.3	7.6	1795	1275.9	526.8	740.9	n.a.	292.7	n.a.	27.5 <sup>6</sup>
2000	8.0	7.9	2340	1608.0	490.2	669.0	308	295.1	15.7	28.3 <sup>5</sup>
2005	9.8	8.5	3450	2150.9	445.5	604.6	351	316.0	14.7	26.3 <sup>4</sup>
2009	9.9 (2008)	8.8	4063 (2008)	2788.2	425.3 (2008)	564.8	370 (2007)	321.6	14.3 (2007)	25.5 <sup>3</sup>
	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)			
	A	EU <sup>2</sup>	A	EU <sup>1</sup>	A	EU <sup>1</sup>	A	EU <sup>1</sup>		
1995	n.a.	575.1	14.3	12.5	9.6	15.7	5.7	6.6		
2000	958	655.9	12.9	10.3	9.0	17.7	5.9	6.8		
2005	1043	682.7	n.a.	9.5	10.3	16.2	5.4	6.8		
2009	1051 (2007)	745.5	10.8 (2006)	8.8	10.5 (2006)	15.6	5.9 (2008)	6.9		

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO.

### Population's health

Life expectancy in good health at age 65 was 10.9 years for males and 11.2 females (2006), which is considerably above the European average (Eurostat, 2009). Infant mortality was 3.8 deaths for 1000 live births in 2008, which is just below the EU average of 4.4 (WHO Regional Office for Europe, 2009).

The prevalence of long-standing illness or disease is about average, with 36.6% for females and 27.9% for males (Eurostat, 2009). The top five causes of death are ischaemic heart disease; cerebrovascular disease; trachea, bronchus, lung cancers; lower respiratory infections; and chronic obstructive pulmonary disease (WHO, 2006).

### Characteristics of the health care system

Health services are funded by a mix of obligatory social and private insurance, with additional co-payments for long-term care. The percentage of the GDP that is spent on health expenditures (9.9%) is just about the EU15 average (see Table A20.1) (WHO Regional Office for Europe, 2009). The number of acute beds is below the EU15 average but the length of acute hospital stay is

relatively long (WHO Regional Office for Europe, 2009). In contrast, bed supply in nursing homes and homes for the elderly is well above the average (WHO Regional Office for Europe, 2009). Chronically ill and disabled people are eligible for cash payments and tax reductions if they satisfy certain conditions. The availability of active GPs is relatively low in the Netherlands (WHO Regional Office for Europe, 2009). People on average have 5.9 outpatient contacts per year, below the EU average.

Currently, transfer of tasks from medical to nursing professionals is an important theme. The share of GDP spent on in-kind social protection benefits (including home care) is relatively high: 8.7% in the EU27 and 10.4% in the Netherlands (Eurostat, 2009). The same holds for expenditure on social services in long-term care (aimed at persons with functional limitations), although these data are only available for 12 countries. Many social services with a focus on promoting the participation of disabled persons in society are financed from municipal funds.

## 2. Structure of the primary care system

### 2.1 Primary care governance

Primary care is the backbone of the Dutch health care system. Health policy is currently focused on improving the organization, integration and transparency of primary care. Policy measures are implemented to improve the organization of acute care (for example by stimulating diagnosis and treatment centres), to increase cooperation between the several disciplines working in primary care and to increase the coordinating role of health care providers within primary care. It also aims to increase innovation and entrepreneurship in the Dutch health care and to increase patient involvement in decision-making to make health care more transparent for patients (ActiZ Visienota Eerstelijns, 2008; Klink, 2008). The optimal delivery of preventive care and health promotion is also given particular attention in policy debates (Bakker et al., 2005; Samenwerkende Gezondheidsfondsen, 2010).

There are several stakeholders that contribute to primary care policy development. Important to mention are: the Royal Dutch Medical Association; Dutch College of General Practitioners; Dutch College for Health Insurers; Federation of Patients and Consumers Organizations in the Netherlands; municipal public health departments; regional support structures; National Association of Organized Primary Care (see Schäfer et al., 2010 for a division of responsibilities).

The Ministry of Health, Welfare and Sports annually defines the total health care budget. However, there is not a particular budget for primary care. Within the overall budget of the Ministry, GPs, pharmacists, physiotherapists and other health care professionals working in primary care have been allocated a certain amount of money and receive their own budget. GPs are reimbursed via health insurers. The level of fees and the capitation fee are set by the government with a certain (small) range which allows for negotiations (Ministerie van Volksgezondheid, 2010).

In addition to allocating financial resources, the national government is responsible for deciding the content of the basic health insurance package; setting tariffs for the services not yet subject to free negotiations; setting public health targets; deciding about capacity in long-term care institutions; safeguarding affordability, efficiency, accessibility and quality of health care. At local level, the municipal public health departments have a major

role in public health. They are involved in prevention (for example by collecting regular population health statistics, and organizing prevention programmes), advise municipalities on public health policy issues and provide needs assessment for acute psychiatric hospitalization. Since 2007, municipalities have also become responsible for implementing the Social Support Act, this includes the provision of a range of home care services (Schäfer et al., 2010).

After completing six years of medical education, those who pass their Doctor of Medicine examination are qualified to practise medicine, including prescribing medicines and providing medical certificates. However, they are not allowed to work as a GP or any other specialty. Postgraduate training in general practice takes three years and consists of a theoretical and a practical part. Every year, about 20% of the medical graduates decide to take this programme.

GPs, like all physicians, should be registered as specified in the Health Care Professions Act before they start practising. Re-registration criteria for GPs have been extended to include 40 hours of training per year and, in addition, at least 10 hours' participation in peer review activities. Participation in a visitation programme will be added as a requirement for re-registration in 2011.

Health care providers are by law obliged to provide "responsible" care on the basis of a quality system according to the Care Institutions Quality Act. In this Act, responsible care is defined as "care of a good quality, which is effective, efficient and patient oriented and which is responsive to the actual need of the patient". Besides this Act, primary care physicians have to comply with numerous guidelines developed by professional organizations such as the Dutch College of General Practitioners and the Dutch Association for General Practitioners. For GPs, these guidelines include treatment criteria and prescription guidelines for a large number of diseases. For primary care practices, these guidelines also include requirements regarding the buildings in which general practices operate (Schäfer et al., 2010).

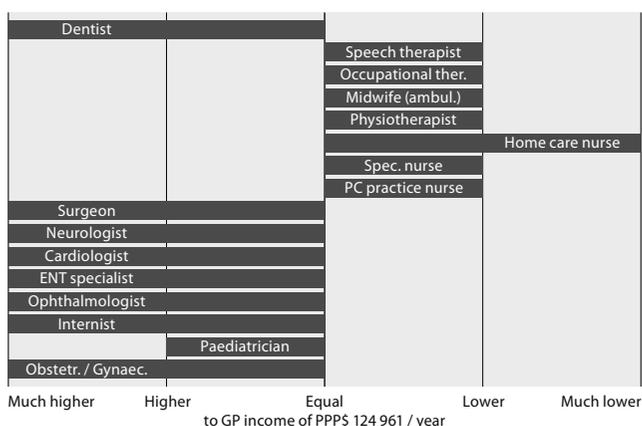
Patient rights such as informed consent, patient access to own medical files, confidential use of medical records, and complaint procedures are protected by law. All health care providers (both institutions as well as private professionals) are by law obliged to organize a patient council (Client Representation Act) to reinforce the clients' legal position and to harmonize supply and

demand. There is climate of regular measurement of patient experiences with health care, to improve the responsiveness of the system (Schäfer et al., 2010).

### 2.2 Economic conditions of primary care

Based on the expenditure data of all primary care disciplines, it is estimated that 14.7% of the total health expenditure is spent on primary care. In 2003, 18.4% of all health expenditures was spent on prevention and public health (Schäfer et al., 2010; Witte, 2006).

**Fig. A20.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



Ninety-nine per cent of the population is insured for health expenses. The health insurance scheme consists of two parts: the basic coverage and the voluntary health insurance. In the basic benefit package is included: care provided by the GP, midwife, physiotherapist (first 10 sessions per year are excluded and have to be paid by the patient) and a maximum number of sessions of care provided by occupational therapists, speech therapist, dietician and remedial therapists. However, for all care received except for general practice care, patients have an annual deductible (€165 in 2010, including for medication prescribed by a GP). This deductible cannot be insured through voluntary health insurance. However, costs for treatment that are not covered within the basic coverage (more than the maximum number of sessions, or care where co-payment is required) can be reimbursed via the voluntary health insurance. Ninety-two per cent of patients have an additional/complementary voluntary health insurance. Patients with chronic diseases receive a reimbursement if they use medication included in a fixed list (Schäfer et al., 2010).

In 2007, only 9% of patients reported general practice care as not affordable (Grol & Faber, 2007).

Eighty-five per cent of GPs are self-employed, and 15% are in salaried service with another self-employed GP (this arrangement is called Huisarts In Dienst van HuisArst).

GPs' remuneration system consists of several components including a capitation fee per registered patient, a consultation fee for GPs, a consultation fee for practice nurses (if any), a contribution for activities that either increase efficiency of GPs or substitute for secondary care (fee-for-service), and compensation for providing out-of-hours care (Gusdorf, Smit & Voorbraak, 2009; LHV, CNV Publieke zaak & ABVAKABO FNV, 2009; Schäfer et al., 2010). The average annual income of a self-employed GP is US\$ 124 961 PPP (in 2006), excluding practice costs (OECD, 2009). The income of medical specialists is much higher compared to this, as shown by Fig. A20.1.

Contract negotiations take place between insurers and the committees that represent GPs (*huisartsenkringen*); and representatives of the Dutch association of GPs. Negotiation on tariffs (fee-for-service and capitation) take place within a very small margin. The minimum and maximum tariffs are set by the government.

In addition, insurers make agreements with individual GPs on a small scale. These individual negotiations mainly concern “modernizing and innovation” activities. On average a GP holds contracts with 14 health insurers, depending on the number of insurers their patients are insured with (NIVEL, 2009).

### 2.3 Primary care workforce development

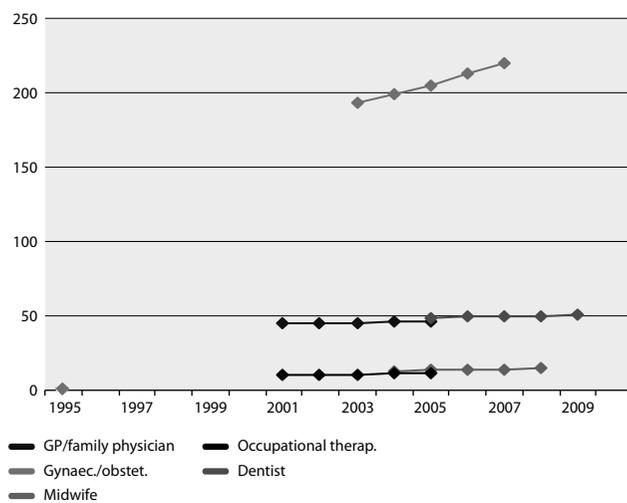
The total number of active GPs as a ratio to total number of active specialists is 0.56 in 2008 (Capaciteitsorgaan, 2008).

Even though the core of primary care is provided by GPs, the primary care workforce also includes dentists, occupational therapists, midwives, physiotherapists, home care nurses, specialized nurses and primary care/general practice nurses (Kroneman, Maarse & Van der Zee, 2006; Schäfer et al., 2010).

Capacity planning studies are frequently performed on primary care workforce capacity needs and development in the future (Capaciteitsorgaan, 2009).

Fig. A20.2 shows for a number of primary care professionals their development in supply over a five-year time period. The steep increase, and high number of physiotherapists is striking. The supply in GPs, dentists and midwives and occupational therapists seems to be stable over time (Eurostat, 2009).

**Fig. A20.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



In 2009, 28% of GPs were aged 55 years and older, and 36% were aged under 45 years. Thus, the largest proportion of GPs was aged 45–55 years (NIVEL, 2009). The average number of working hours per week by a full-time GP is 31.2 hours (Van den Berg et al., 2006). The responsibilities of GPs are set out in detail in several acts, including the Medical Treatment Act (WGBO), and the Health Care Professions Act (Ministerie van Volksgezondheid, 1993, 1994).

All eight medical faculties have a postgraduate training in family medicine, which was first introduced in 1974 (Huisartsopleidingen Nederland, 2010). In 2008, 20% of all medical graduates chose to enrol in postgraduate training in family medicine (Capaciteitsorgaan, 2008). Family medicine is also a subject in the undergraduate medical curriculum. Every medical faculty is allowed to structure their own medical curriculum. Every curriculum is organized in such way that future doctors (medical students) experience as much as possible of the specialties. A postgraduate programme in family

medicine takes three years, of which 21–30 months are spent in a general practice, and 6–15 months in internships in hospital within three different specialties (College voor Huisarts Geneeskunde, 2008; Erasmus MC, 2009; Rijksuniversiteit Groningen, 2010; Vrije Universiteit Amsterdam, 2009).

There is also a specific training for primary care practice nurses available, which can take 1–2 years depending on their vocational diploma. To become a district or community nurse there is only a general nursing training available (of level 4 or 5) which takes four years (Beroepsvereniging Praktijkverpleegkundigen en Praktijkondersteuners, 2007).

The majority of primary care physicians (88%) reported in 2009 being satisfied with practising their medical profession (Faber, Voerman & Grol, 2009).

Almost all primary care disciplines have their own national association. For example, roughly 95% of all GPs are members of the Dutch Association for General Practitioners, and the Dutch College for General Practitioners (LHV, 2010; NHG, 2010). There are several (peer-reviewed) journals available specifically for primary care professionals.

### 3. Primary care process

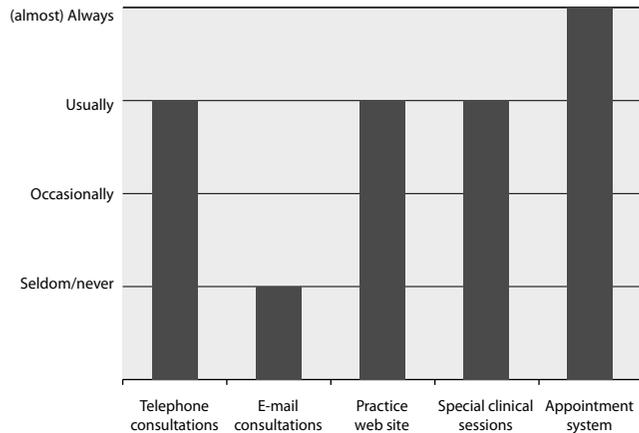
#### 3.1 Access to primary care services

There are some small geographical and urban–rural differences in the availability of GPs. The difference between the regions (regional support structures) with the highest and lowest density of GPs is 16.7 GPs per 100 000 population. The difference between average urban and rural density of GPs is 3.6 GPs per 100 000 population (NIVEL, 2009). Only in some regions, there are shortages of GPs. It is approximately a 1.3-minute drive by car from anywhere in the Netherlands to reach a GP. Around 0.1% of the Dutch population have to drive more than 10 minutes by car to reach a GP (Westert et al., 2010). There are no problems in the availability of pharmacies. There are three types of pharmacies: public pharmacies, hospital pharmacies and dispensing GPs. The nearly 1900 public pharmacies cover approximately 92% of the population. The remaining 8% is, especially in rural areas, covered by dispensing family practices. In 2008, there were 459 dispensing practices (Schäfer et al., 2010; Westert et al., 2010).

In 2007, 92% of the respondents to a Eurobarometer survey reported to be satisfied with access to primary care in general (European Commission, 2007).

All GPs use an appointment system. General practices are obliged to provide primary care to patients from 8.00 a.m. to 5.00 p.m. Monday from Friday. In addition, general practices are obliged to care for their patients 24 hours a day and 7 days a week, and are thus obliged to arrange after-hours care to offer continuous treatment possibilities. In the past GPs used small-scale rotational services. Nowadays, large-scale primary care cooperatives are commonly used for the provision of after-hours care (Schäfer et al., 2010). On average, GPs perform 8.75 home visits per week (NIVEL, 2009). GPs usually perform telephone consultations, offer special sessions or clinics for certain patient groups and have a practice web site, as shown by Fig. A20.3. E-mail consultations are rarely performed, however (NIVEL, 2009; Verheij, Ton & Tate, 2008).

**Fig. A20.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



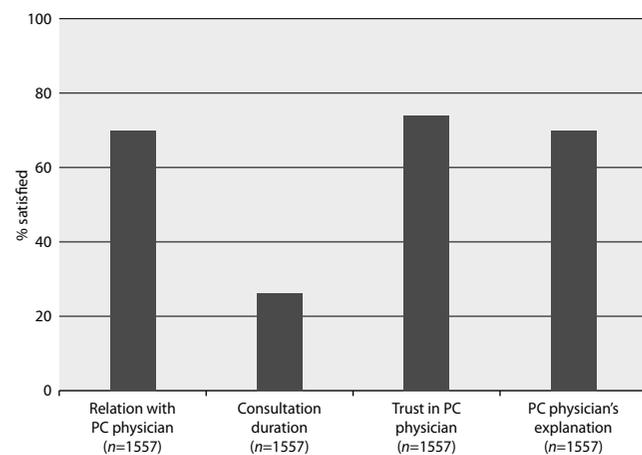
### 3.2 Continuity of primary care services

All Dutch citizens are registered with a general practice. In principle, all patients are free to choose their own GP. In practice, limitations exist. An example of such a limitation is the mutual agreement among GPs in the city of Utrecht. Because of this agreement patient choice is limited: they can only register themselves with GPs settled in the district where they live. GPs have the right to refuse a patient. Reasons for refusing patients can be that the patient lives too far away from the practice or because the GP has too many patients on his/her list (Schäfer et al., 2010).

Norms have been established by the Dutch Association of General Practitioners on the allowed minimum and maximum practice size (800 and 2750 respectively) and the distribution of new general practices. GPs have on average 2322 patients (in 2008) on their list for whom they are responsible (Hingstman & Kenens, 2008). The proportion of patients reporting that they always have contact with their own GPs was 71.1% ( $N = 9334 > 18$  year). Other patients reported visiting other GPs as well (Jabaaij et al., 2006).

Fig. A20.4 shows that almost three-quarters of patients is satisfied with their relation, and the quality of their relation with their primary care physician. However, only 26% ( $N = 1557$ ) reported in an international survey being satisfied with the consultation duration (Grol & Faber, 2007). The standard consultation length is 10 minutes (Verheij et al., 2010b).

**Fig. A20.4:** Patient satisfaction with aspects of care provision (year 2007)



All GPs keep clinical records for all patient contacts routinely, and have a computer in their practice. Ninety-eight per cent of Dutch GPs use a GP Information System (Huisarts Informatie Systeem, HIS) to support their work in terms of financial administration, prescription of medicines, communicating prescriptions to pharmacists, or keeping electronic medical records by using the patient information system (Dobrev et al., 2008; Faber, Voerman & Grol, 2009).

Patient consultations by specialists are on the basis of a referral system. All GPs use referral letters, either by using the GP Information System (58%) or by using "regular" hand-written letters for referrals (40%) (Van den Heuvel & Kaag, 2004).

**Table A20.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Woman aged 50 with lump in her breast</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Uncomplicated diabetes type II</li> </ul>	<ul style="list-style-type: none"> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Wound suturing</li> <li>• Excision of warts</li> </ul>	<ul style="list-style-type: none"> <li>• Setting up an intravenous infusion</li> </ul>
Preventive care (from a list of 8 items)	–	<ul style="list-style-type: none"> <li>• Breast cancer screening</li> <li>• Cholesterol level checking</li> </ul>
Health promotion (from a list of 4 items)	–	–

Note:

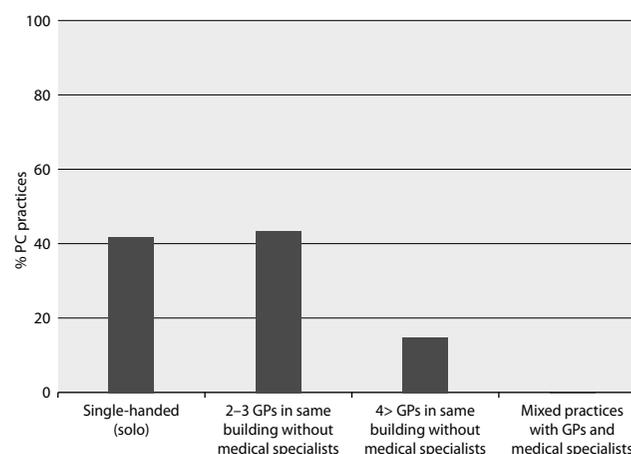
\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

In 2009, the electronic medical record was introduced in a large number of general practices and out-of-hours cooperatives. If the electronic medical record system is used by both the GP as well as the out-of-hours cooperative the information is transferred instantly. In general, it takes two weeks before GPs receive information from a specialist after treatment (Faber, Voerman & Grol, 2009).

### 3.3 Coordination of primary care services

GPs are gatekeepers of the health care system, and a referral is required to visit medical specialists. Patients do have direct access to home care nurses, physiotherapists, ambulatory midwives, occupational therapists, remedial therapy and dentists (Verheij et al., 2010a).

A majority of GPs (58.1%) work in group practices with two or more GPs. The remaining practices are single handed (see Fig. A20.5) (NIVEL, 2009).

**Fig. A20.5:** Shared practice

Team work in primary care, for example by means of face-to-face meetings among GPs and other primary care disciplines, is common practice, particularly for GPs working in health centres with several disciplines in one building. The ratio of full-time equivalent (FTE) supportive staff/FTE GP is 1.4. General practices are most commonly staffed by a practice assistant and/or nurse practitioners (Faber, Voerman & Grol, 2009). It is very common that primary care nurses perform nurse-led diabetes clinics in primary care, or nurse-led health education (Nielen & Schellevis, 2008; Van den Berg et al., 2004).

There is also frequent collaboration between primary care and medical specialists. For example, medical specialists

commonly provide clinical lessons for GPs. It is also common practice for GPs to ask (telephone) advice from medical specialists.

There is a broad system of (public) health care monitoring in the Netherlands. For example, 92 general practices (nationwide) form the Netherlands Information Network of General Practitioners. Data from over 350 000 patients is automatically processed through this network to monitor, for example, the prevalence of diseases, physician and patient behaviours, and delivery of care process (Verheij et al., 2010a). There is also a Supply and Demand Monitor (VAAM) in which data is regularly collected to identify the demand for health care in relation to specific diseases, specific demographic variables and the supply of health care for specific diseases and from various providers. With this information, background information on the demand and supply side of health care becomes visible for policy makers (NIVEL, 2010).

### 3.3 Comprehensiveness of primary care services

Ninety-six per cent of total patient contacts are handled solely by GPs without referrals to other providers (Verheij et al., 2010a). This is a good indication of the comprehensive scope of services provided by GPs, but also by other primary care professionals.

In terms of type of first-contact health problems of patients, GPs for example frequently see women aged 18 asking for oral contraception, or young women asking for confirmation of pregnancy, children with severe cough, or people with psychosocial problems. GPs frequently provide treatment and follow-up of conditions such as uncomplicated diabetes type II, mild depression, cancer (in need for palliative care) and congestive heart failure.

GPs are also involved in various preventive care activities such as the National Immunization Programme, testing for sexually transmitted diseases, screening for HIV/AIDS. GPs are more involved in family planning/contraceptive care, whereas midwives primarily take care of routine antenatal care, and routine paediatric surveillance is performed by infant centres. GPs are also usually involved in health promotion activities such as counselling in case of problematic alcohol consumption, smoking cessation or poor physical activity (Verheij et al., 2010a).

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

In 2008, GPs provided 6.7 prescriptions per person per year (Verheij et al., 2010a). The use of antimicrobials for systemic use in ambulatory care in 2007 was 12.8 DDD/1000 inhabitants/day (Cars, Molstad & Melander, 2001; ESAC, 2009).

Concerning the quality management of chronic diseases there is room for improvement. Diabetic population aged >25:

- 45% with cholesterol  $> 5$  mmol/l
- 42% with blood pressure above 140/90 mm Hg measured on last 12 months
- 48% with HbA1C  $> 7.0\%$
- 38% with overweight and obesity and BMI measured in the past 12 months
- 85% with eye fundus inspection in the past 12 months

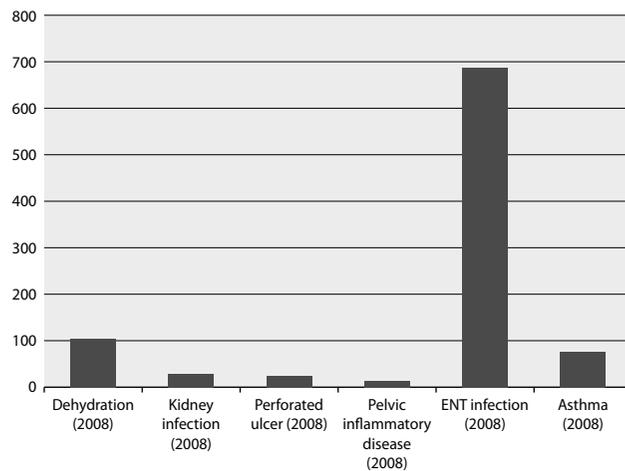
Individuals with COPD:

- 33.9% have had a lung function measurement in the past 12 months
- 77.0% have had a follow-up visit in primary care in past 12 months

(Dutch Institute for Healthcare Improvement, 2008; RIVM, 2009; Verheij et al., 2010a).

The number of hospital admissions for primary care sensitive conditions give an indication of the quality of primary care. Fig. A20.6 shows particular high hospital admission rates in 2008 for ENT infections, but also relative high rates for patients with dehydration and asthma (Prismant, 2008).

**Fig. A20.6:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



In 2007, 74% of the population at risk (people aged 60 or above and people with a higher risk indication) chose to get a flu vaccination (Preventie van influenza samengevat (Bovendeur, 2008) ).

Combination vaccines are used for children. Mumps, measles and rubella and diphtheria, pertussis, tetanus and polio are given in a series of vaccinations from days after a child has been born until the age of 10; in addition girls aged 12 years receive the HPV vaccination. Children will only receive the hepatitis B vaccination if one (or both) of their parents, or their environment have a high risk for hepatitis B. Annually, roughly 36 000 children receive a hepatitis B vaccination due to this higher risk (Zwakhals & Van Lier, 2009a, 2009b, 2009c).

Roughly 1.1 million women yearly receive an invitation for breast cancer screening and 850 000 women participate in the screening. Only women aged 50–75 years are invited to participate in the screening (Centraal Bureau voor de Statistiek, 2008; Schopper & De Wolf, 2007; Von Karsa et al., 2007).

Every year 850 000 women (aged 30–60 years) are invited for a Pap smear test, of whom 66% participate in the screening (in 2003). Pap smears are taken by GPs and their practice assistants (Isken, 2009; Linos & Riza, 2000).

#### 4.2 Efficiency of primary care

Out of all general practice–patient contacts in 2008, 5.8% were home visits and 19.8% were telephone contacts (Verheij et al., 2010a). An average consultation has a duration of 10 minutes (Van den Berg et al., 2010b).

On average, Dutch citizens visit their GP 3.4 times a year. A GP has on average 123 consultations per week. The proportion of working hours spent on direct patient care is 69% (Faber, Voerman & Grol, 2009; Verheij et al., 2010a).

There were on average 188 new referrals from GPs to medical specialists per 1000 listed patients in 2008 (Verheij et al., 2010a).

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# 21 Norway

*T. Hasvold, B. Christensen*

## 1. The context of primary care

### Country and population

Norway is located in northern Europe, bordering the North Sea and the North Atlantic Ocean, sharing physical borders with Sweden, Finland and Russia.

The climate is temperate along the coast, modified by the North Atlantic current; it is colder towards the interior. Its 4.8 million inhabitants live in a total land area of 386 958 km<sup>2</sup>, which averages out at 15 people per km<sup>2</sup>. This makes Norway one of the most sparsely populated countries in Europe.

Population growth in 2009 was 1.2%, and the fertility rate was 1.98 births per woman (Statistics Norway, 2010c). The tendency of people to move from the north and west to the more densely populated areas of the south-east is stable (Statistics Norway, 2010c). The average age of the population is 39 years; 25.5% of the population are below 20 years of age, 61.5% are between 20 and 66 years, and 13% are older than 66. Also in Norway there is an ageing population. In 2002 0.6 million people were over 67 years, in 2050 it is estimated there will be between 1.1 and 1.4 million people over 67 years old (Statistics Norway, 2010c).

**Table A21.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Norway	EU <sup>1</sup>	Norway	EU <sup>1</sup>	Norway	EU <sup>1</sup>	Norway	EU <sup>1</sup>	Norway	EU
1995	7.9	7.6	1862	1275.9	401	740.9	n.a.	292.7	n.a.	27.5 <sup>6</sup>
2000	8.4	7.9	3039	1608.0	381	669.0	n.a.	295.1	n.a.	28.3 <sup>5</sup>
2005	9.1	8.5	4301	2150.9	404	604.6	362	316.0	12.4	26.3 <sup>4</sup>
2009	n.a.	8.8	n.a.	2788.2	310 <sup>7</sup>	564.8	n.a.	321.6	n.a.	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Norway	EU <sup>2</sup>	Norway	EU <sup>1</sup>	Norway	EU <sup>1</sup>	Norway	EU <sup>1</sup>
1995	n.a.	575.1	8.2	12.5	14.6	15.7	n.a.	6.6
2000	n.a.	655.9	7.8	10.3	15.5	17.7	n.a.	6.8
2005	1364	682.7	6.9	9.5	17.4	16.2	n.a.	6.8
2009	n.a.	745.5	4.6 <sup>7</sup>	8.8	n.a.	15.6	n.a.	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010). Norwegian values are based on WHO European Health for All (WHO Regional Office for Europe, 2010) and Statistics Norway (2010c).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Figures from Statistics Norway (2010c).

### Development and economy

Norway is a constitutional monarchy, in which a hereditary monarch is head of state and the Prime Minister head of government. The Parliament has 169 seats and general elections are held every four years.

In 2009 the GDP per capita in Norway was NOK 493 032 (€62 043), that is 78% above the average of the 27 EU countries. In the EU, only Luxembourg comes above Norway in this respect.

In 2009 43.3% of the population over 16 years of age have completed their secondary level education and 26.7% have education at tertiary level. Unemployment was 3.2% (Folkehelseinstituttet, 2010a).

### Population health

Life expectancy for women is 83 years, and for men 78.5 (Statistics Norway, 2010c). The infant mortality rate is 3.7 per 1000 live births (2008). Leading causes of death in 2008 are circulatory disease 34%, cancer 25.5% and respiratory disease 9.6% (Statistics Norway, 2010c).

### Characteristics of the health care system

Following hospital reform in 2001, the system in Norway changed from a decentralized to semi-centralized national health service model. Before 2001, the counties owned hospitals. In 2001 the state took over the hospitals but established the regional health authorities as enterprises that deliver specialized health services. The organization of the regional health authorities and health enterprises is unique to Norway. The regions have two roles, the authority role and the enterprise role. In their principal role regions have a “care role” in providing the population with specialized health care services; the other is as a supplier and producer of specialized health care, since regions own the health enterprises. During the last three decades Norway has developed enterprises that enjoy an element of freedom similar to that seen in the private sector, although the state has built-in directing/steering and control mechanisms in the organization, in other words an “in between solution”. Consequently, the responsibility for primary care and secondary care has been divided between different governmental levels. The regional health authorities are responsible for specialized health care, while the municipalities are responsible for primary health care.

Health care expenditure as percentage of GDP is a little bit above the European average. Norway has half the

number of hospital beds per 100 000 inhabitants. Despite this, the number of acute care admissions is comparable to the European average, but length of stay is shorter (see Table A21.1).

## 2. Structure of the primary care system

### 2.1 Primary care governance

The organizational structure of the Norwegian health care system is built on the principle of equal access to services, independent of social status, location and income. While the role of the state is to provide national health policy, to prepare and oversee legislation and to allocate funds, the main responsibility for the provision of health care services lies with the four health regional authorities and the 431 municipalities. The municipalities are responsible for primary care. The aim of primary care is to improve the general health of the population, and to treat diseases and deal with health problems that do not require hospitalization. This includes both preventive and curative treatment such as:

- promotion of health and prevention of illness and injuries, including organizing and running school health services, health centres, child health care provided by health visitors, midwives and physicians, pregnancy check-ups and vaccinations according to the recommended immunization programmes;
- diagnosis, treatment and rehabilitation, including responsibility for general medical treatment (including emergency services), physiotherapy and nursing;
- nursing care in and outside institutions. Municipalities are responsible for running nursing homes, home nursing services and home help services.

Contracts between municipalities and private providers are a very important tool in guaranteeing good quality for service users and also in securing good cooperation with other parts of the health system. The municipalities have a contractual relationship with GPs, who are part of the national regular GPs scheme. These contracts regulate the relationship between the GP and the municipality. For instance, the municipality has the right to order the GP to do municipality health care work (a maximum of 7.5 hours a week), if this is specified in the agreement. In 2006, 99% of the population is registered on the regular

general practice scheme, a list system which aims to strengthen the patient–physician relationship by giving the patient the right to choose a regular GP.

GPs work as gatekeepers for specialized health services. That is, if such services are needed, the GP has to send a referral to a hospital, or a private practice specialist. Within the limits of legislation and available economic resources, the regional health authorities and municipalities are formally free to plan and run public health services as they like. However, in practice, their freedom to act independently is limited by available resources.

Although municipalities are responsible for primary care services, the central government has five central public health institutions, which are professional and administrative bodies under the authority of the Ministry of Health and Care Services. First, there is the Norwegian Directorate for Health, which is a professional body within the field of health and social affairs and has legal authority within its field. The Directorate monitors trends in health and care services. The Directorate also contributes to the implementation of national policy within health and sets national standards of behaviour in certain areas (Ministry of Health and Care Services, 2011). Second, there is Board of Health, a national supervisory authority with responsibility for general supervision of health and social services. It ensures that services are run in accordance with professional standards. Third, there is National Institute for Public Health, which is a national centre for health monitoring and for expert knowledge of epidemiology, infectious disease control, environmental medicine, forensic toxicology and drug abuse. Therefore it can be argued that, although central government is passing governance to local authorities, it continues to control the health care services through instructions, directives, guidelines, legislation, budgeting and financial incentives imposed by different central government bodies.

### 2.2 Economic conditions of primary care

Municipalities' gross expenditure on health services reached nearly NOK 10.5 billion (€1.18 billion) in 2009 – an increase of almost NOK 680 million (€76 million) from 2008, which is equivalent to an increase of almost 7%. The expenditure includes wage costs, per capita grants to private physicians and physiotherapists, expenditure on health centre services and preventive

health care. The increase is equivalent to approximately NOK 2160 (€242) per inhabitant (Statistics Norway, 2010a).

In 2008, primary care takes up 5.8% of total health expenditure (Helsedirektoratet, 2010). The population is fully covered by public health insurance for general practice services. However, there are out-of-pocket expenses for most health services, but if annual expenses for any health services exceed a certain level, all services above this threshold will be covered by the national insurance. This expenditure ceiling does not depend on income.

In 2006, co-payment for general practice services was NOK 1.24 billion (€0.16 billion). This was 32.4% of total financing of GPs. The co-payment was covered by the national insurance for 40% of consultations. The proportion of GPs who are salaried with national or local authorities is 7% and 93% are self-employed with contracts with local health authorities (municipalities). They are paid a mix of capitation fees, fee-for-service payments and co-payments from the patient. A rough estimate of the average mid-career income of GPs is around €100 000 to €130 000. Other staff within primary care, like nurses, midwives and physiotherapists are paid fixed salaries by the municipalities.

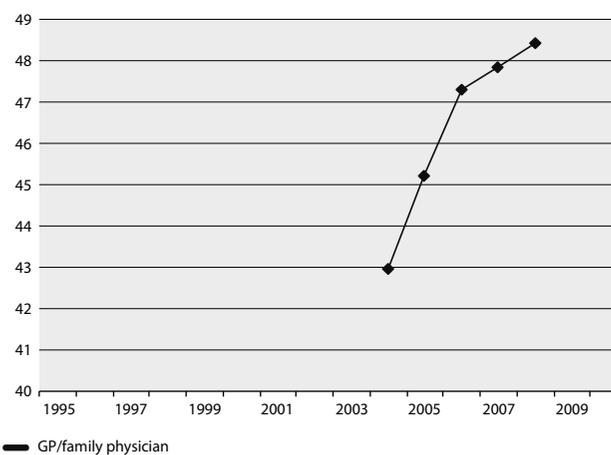
### 2.3 Primary care workforce development

Nurses and GPs are the core of primary care. The White Paper *The collaboration reform* (Norwegian Ministry of Health and Care Service, 2010) aims to strengthen primary care to handle more health care services: tasks which are within specialized health care today should be transferred to primary care. Besides, GPs should also have more focus on chronic care and illness prevention. Hence more and also other groups of health personnel will be needed, such as specially trained nurses, physiotherapists, social workers, health educationists (a proposed new work group whose focus is to empower patients to take better care and live with chronically diseases). It will require much more teamwork and collaboration than there is today.

In 2005, there were 45 GPs per 100 000 population, whereas the total number of physicians was 362 per 100 000. The supply of GPs increased from 43 per 100 000 in 2003, to 48 GPs per 100 000 inhabitants (see Fig. A21.1). The number of physicians and physiotherapists is also increasing. A total of 104 new

physician man-years were added from 2008 to 2009, attaining coverage of physicians at 9.5 per 10 000 inhabitants. Sixty new physiotherapist man-years were added from 2008 to 2009, reaching a coverage of physiotherapists at 8.7 per 10 000 inhabitants, which is the same coverage as in 2008. The number of nurses increased from 14 103 in 2003 to 18 514 in 2008 (Statistics Norway, 2010a).

**Fig. A21.1:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



## 3. Primary care process

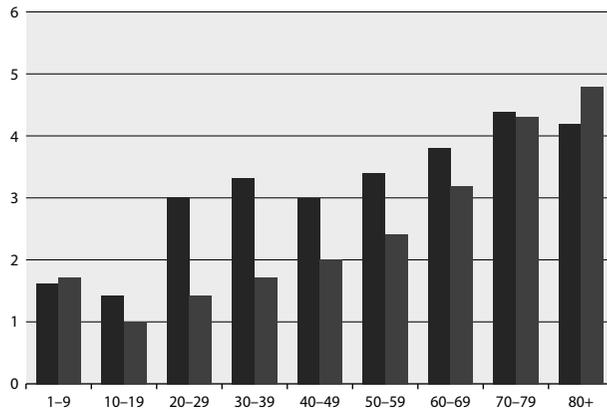
### 3.1 Access to primary care services

The regular GPs scheme from 2001 intended to improve quality and access to primary care. Patients have the right to choose a GP to strengthen the relationship between GP and patient. Patients can change their GP only twice a year. There is a registration system through which the patients sign up with a physician; 99% of the population is included in this system which gives each GP an average of 1219 persons on their list (2007), however this may vary a considerably. In 2006, 71% of the population visited their GP on average 2.5 times for curative purposes (see Fig. A21.2). When telephone contacts are included, the figure is 2.9 times. Statistics Norway (Brøyn, Kvalstad & Skretting Lunde, 2007) reports that there are 4.6 contacts with general practice per person per year overall, and 2.2 consultations (face to face) per person per year overall.

The Act of Municipality Health Services requires GPs to have an emergency service to cover out-of-hours medical care. This is mostly arranged as one emergency

service in each municipality and covered by the GPs in this municipality. In addition to the numbers above, there were 300 consultations per 1000 inhabitants in the emergency service, and 440 consultations by contracting specialists.

**Fig. A21.2:** Number of consultations (incl. home visits) in 2006 per habitant by age and sex (blue bars women, red bars men)



Source: Nossen, 2007: Fig. 8.

### 3.2 Continuity of primary care services

As stated above, the regular GP scheme intended to improve continuity of primary care, especially for elderly people and for the chronically ill. Patients seem to be satisfied with this arrangement as 94% state that they are satisfied with their relation with their primary care physician (Godager, Iversen & Lurås, 2007).

All physicians in primary care keep records of their patients; 98% have an electronic patient record. Due to Norwegian regulations, the record cannot be shared with other health personnel, even if GPs work in a group in shared premises, and stand in for one another. Also the nursing services keep their own records, which can lead to the patient having a different medication list with the physician and with the nursing service, for example. Obtaining the necessary information when needed is thus very challenging, and also some of the background for the White Paper “The collaboration reform”. The Norwegian Health ministry has put strong emphasis on developing electronic messaging (Sosial – og helsedepartementet, 1996).

### 3.3 Co-ordination of primary care services

Access to specialist services requires referral from a GP. The patient can also go to a contracted specialist directly, but then the patient has to pay for the whole consultation out of pocket; there will be no reimbursement from the national health insurance. The GP receives discharge letters from hospitals electronically and is in many cases responsible for follow-ups, but not from private practising specialists with contracts with the regional health enterprise. Municipality nursing services usually coordinate the services for patients’ home care. They contact the patient’s GP when there is a need for consultation or referral to specialist services. They also receive discharge letters from the hospitals.

There seem to be no institutionalized meetings between the different professionals within primary care.

### 3.4 Comprehensiveness of primary care services

Table A21.2 provides an overview of the GPs’ involvement in delivery of various primary care services. Pregnancy care is performed both by GPs and midwives. GPs should do some consultations during pregnancy, but midwives do most of them. Midwives also offer birth-preparing courses.

Public nurses follow children from birth through the national programme of vaccination and regular health check-ups up to the age of 12. There are also public nursing services in schools, offering consultations for pupils. Much of their work is directed towards giving advice on smoking, alcohol and drug misuse prevention, and contraception issues. An important function is also being a conversation partner for youngsters finding their identity.

General nursing services are a right for all inhabitants in a municipality. Besides nursing homes, the nursing services comprise home care services for those in need.

GPs offer the first contact point for all adults and children when they are in need of health services. The practices are well equipped to perform diagnostic investigations, follow-up treatment and minor surgery. The most commonly used ICPC-2 code is on muscular/skeleton diseases, heart and circulatory diseases and airways/pulmonary diseases, in this order. Together these account

for 46% of consultations. In the emergency services, the most commonly used ICPC-2 code is airway/ pulmonary diseases (Nossen, 2007).

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

The average number of prescriptions annually provided by GPs per 1000 contacts is 695 (2009, see Table A21.3).

**Table A21.3:** Average number of prescriptions by GPs per 1000 contacts by age in 2009\*

Age group	Prescriptions per 1000 contacts
All ages	695.07
0–9	495.60
10–19	498.32
20–29	667.28
30–39	675.60
40–49	702.93
50–59	787.12
60–69	874.02
70–79	934.30
80–89	918.44
90+	756.05

Source: Folkehelseinstituttet, 2010b.

Note: The database counts every prescription as one patient, and does not take into account that one person may have more than one prescription.

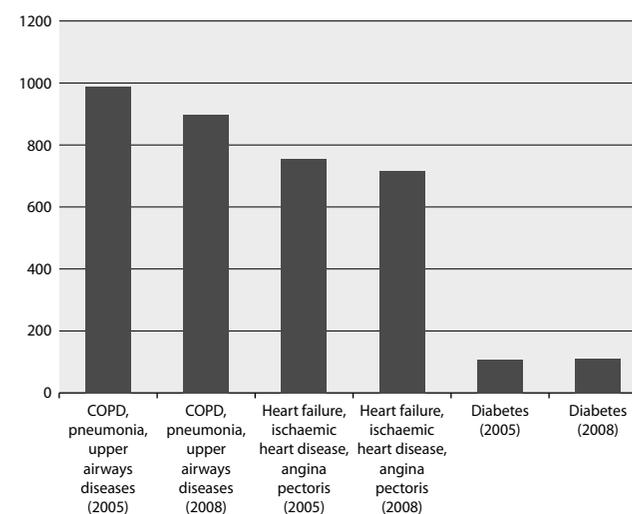
Use of antimicrobials for systemic use expressed in DDD/1000 inh/day in ambulatory care: 14.65 (2007) (ESAC, 2010).

Nearly 140 000 people use medicines for diabetes in Norway today. However, we do not know how many actual diabetes cases there are as some are undiagnosed or managed through exercise and diet control. Figures from the Norwegian Prescription Database show that the number of users of diabetes tablets increased from 79 000 in 2004 to 105 000 in 2008; the increase was largest among the elderly (Norwegian Institute of Public Health, 2010).

An increase in the number of users can be due to longer life expectancy and because more people are diagnosed with the disease. It appears that more people with type II diabetes are receiving medicinal treatment, and that they

are receiving more intensive treatment than previously. The risk for diabetes also increases with age. Among 60 – and 75-year-olds approximately 5% and 10% respectively have diabetes (Norwegian Institute of Public Health, 2010).

**Fig. A21.3:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



Source: Statistics Norway, 2010b.

There is no good data for inappropriate hospital admissions in Norway. In a study from 1999 24% of admissions to an internal medicine department for a six-week period were judged by an expert panel to be inappropriate (Eriksen et al., 1999). Fig. A21.3 shows relatively high hospital admission for patients with some chronic diseases (Statistics Norway, 2010b).

The immunization programme for children ensures that 92% of all infants are vaccinated against diphtheria, tetanus, pertussis, measles, mumps and rubella. For hepatitis B there is no data, as this is not part of a national vaccination programme. Only those in “high-risk groups” (health personnel, drug abusers, immigrants from parts of the world where this is considered a threat) are offered the vaccine.

##### 4.2 Efficiency of primary care

In 2006 there were approximately 11.6 million consultations by GPs. Of these less than 100 000 were home visits, that is 0–1%. There is poor data on the length of consultations, but a standard consultation is estimated and planned in schedules as 20 minutes.

**Table A21.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man aged 28 with a first convulsion</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Uncomplicated diabetes type II</li> <li>• Rheumatoid arthritis</li> <li>• Mild depression</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Insertion of IUD</li> <li>• Fundoscopy</li> </ul>	–
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Testing for sexually transmitted diseases</li> <li>• Screening for HIV/AIDS</li> <li>• Cervical cancer screening</li> </ul>	• Immunization for tetanus
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> <li>• Counselling in the case of problematic alcohol consumption</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

The number of GP consultations per capita per year is 2.2 in 2005 (and 4.6 contacts per person per year). Average number of patient consultations per week is 81 in 2005. Average percentage of working hours spent on direct patient care is 67 in 2005 (Faber, Voerman & Grol, 2009).

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# 22 Poland

*A. Windak, M. Oleszczyk*

## 1. The context of primary care

### Country and population

Poland is situated in central Europe, with a territory of 322 575 km<sup>2</sup>. The population in 2008 was 38.14 million; women made up 51.7%; 16.7% of the population was aged 0–15 years; and 13.5% are over 65 years. Average density is 122/km<sup>2</sup>. Poland is a parliamentary republic and a European Union Member State. The term of office of the Parliament is four years. The term of office of the President of the Republic of Poland, also elected in a general election, lasts five years (Central Statistical Office, 2010a, 2010b).

### Development and economy

Per capita income in Poland in 2008 was PPP US\$ 17 294 per inhabitant. Poland ranked 41st in the Human Development Index with score 0.795 in 2010.

The unemployment rate is currently 13%. The proportion of the population aged 15 years and older with a higher education (in 2002) is 10.2% (Central Statistical Office, 2010a, 2010b; Klugman et al., 2010). The emigration rate is 5.1%, with the main destination being western European countries.

**Table A22.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Poland	EU <sup>1</sup>	Poland	EU <sup>1</sup>	Poland	EU <sup>1</sup>	Poland	EU <sup>1</sup>	Poland	EU
1995	4.5	7.6	411	1275.9	629	740.9	230	292.7	n.a.	27.5 <sup>6</sup>
2000	5.5	7.9	583	1608.0	581	669.0	222	295.1	13	28.3 <sup>5</sup>
2005	6.2	8.5	857	2150.9	650	604.6	214	316.0	16	26.3 <sup>4</sup>
2009	6.4	8.8	1035	2788.2	481	564.8	229	321.6	16	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Poland	EU <sup>2</sup>	Poland	EU <sup>1</sup>	Poland	EU <sup>1</sup>	Poland	EU <sup>1</sup>
1995	550	575.1	10.8	12.5	13.3	15.7	5.4	6.6
2000	496	655.9	8.9	10.3	15.5	17.7	5.4	6.8
2005	509	682.7	6.5	9.5	18.6	16.2	6.3	6.8
2009	520	745.5	5.9	8.8	19.43	15.6	6.8	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010). Polish average values are based on Centrum Systemów Informacyjnych w Ochronie Zdrowia (2002, 2006, 2008; OECD, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO.

## Population's health

Life expectancy at birth in 2008 was 80 years for females and 71 years for males. Life expectancy at the age of 60 for females and males was 23 and 18 years respectively. Infant mortality in 2008 was 5.64 per 1000 live births (Central Statistical Office, 2010b). The most common causes of death are cardiovascular diseases, malignant neoplasm, accidents and intoxications, with a trend of decreasing numbers of cardiovascular diseases deaths and increasing numbers of deaths from cancer (Centrum Systemów Informacyjnych w Ochronie Zdrowia, 2009b).

## Characteristics of the health care system

Nearly all of the population is insured by the National Health Fund (Narodowy Fundusz Zdrowia: NFZ) – a monopolistic, centralized government agency (Central Statistical Office, 2010a, 2010b).

Health care resources have consistently increased over the past 15 years (see Table A22.1), but are still at 65% of the EU average. There is a constant increase in outpatient contacts with quite a stable ratio of primary care physicians. Although the number of hospital beds decreased by one-third over 12 years, an increase of hospital admissions is observed. Average length of stay

in hospital decreased by nearly half, however (Centrum Systemów Informacyjnych w Ochronie Zdrowia, 2002, 2006, 2008; OECD, 2010).

## 2. Structure of the primary care system

### 2.1 Primary care governance

In the middle of the 1990s several attempts were made to develop a policy document aiming to describe the desired development of primary care in Poland. Due to frequent changes of government at that time none of these attempts was successful. As a result, there is no clear governmental primary care policy, for example to regulate equal access to primary care providers or to stimulate multidisciplinary collaboration among health professionals. There is no special department dedicated to the problems of primary care in the Ministry of Health and the main responsibility in this field is shifted to local government at the community level (*"Gmina"*). Local authorities are obliged by law to facilitate organization of primary health care services and maintain equal access to them for all inhabitants. In some cases they are directly involved, running the primary health care institutions, in other cases this is through the ownership of the facilities, hired from them by private health care providers.

According to legal regulations only physicians vocationally trained in family/general medicine are entitled to provide primary care within the public system (Act on Health Services Financed with Public Funds, 2004). However, temporarily all other physicians already working in primary care settings, are allowed to continue their work up to 2017, by which date they should complete specialization in family medicine or leave family practice (Zimna, 2008). Organization of primary care providers, including requirements for equipment and premises, is regulated in detail by the order of the President of the National Health Fund – the exclusive health insurance company in Poland (Narodowego Funduszu Zdrowia, 2009). Clinical guidelines for primary care providers are published occasionally, mainly as a joint venture of the College of Family Physicians in Poland and other specialist scientific associations. In most cases widely accepted international guidelines are adapted to the country-specific situation, with a clear and transparent consensus procedure employed. Some guidelines are regularly updated (e.g. hypertension or diabetes mellitus).

Patient rights have been protected by national law, ensuring them notably of informed consent, patient access to their own medical files, confidential use of medical files, and complaint procedures (Act on Patients' Rights and Patient Rights Spokesman, 2009).

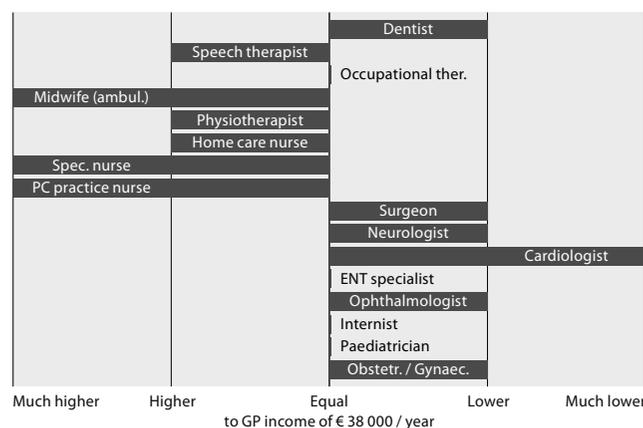
### 2.2 Economic conditions of primary care

In the 2009 financial plan the National Health Fund has reserved 13% of its budget for primary care services. This figure increased significantly during the last few years. In addition, about 2% of the budget is devoted to preventive services, which are also partially conducted by primary care providers (Narodowy Fundusz Zdrowia, 2010).

In 2008, 98% of the Polish population was insured by the National Health Fund and this insurance also covered the full range of primary care (Narodowy Fundusz Zdrowia, 2009). These services are provided free of charge without any patient co-payment. Medicines prescribed by primary care physicians, like medicines prescribed by any doctor working within the frame of the contract with the National Health Fund, are divided into three major categories. The first is free of charge for the patients; in the second there is a different level of co-payment; and, finally, the cost of medicines belonging to the third group of patients has to be covered totally out of pocket. Only 8% of the population in 2007 found primary care not (very) affordable (European Commission, 2007).

Primary care physicians can work either as salaried employees or as independent contractors. In 2007, 57% of primary care physicians worked as salaried staff, employed by public health centres, private companies or other doctors, while only 19% of physicians holding a specialist diploma in family medicine worked as salaried staff (Centrum Systemów Informacyjnych w Ochronie Zdrowia, 2008). Salaried doctors usually receive a flat salary, with a small bonus related to the number of years of their professional career or, additionally, a bonus which is subject to the decision of the owner or manager of the clinic. The income of self-employed doctors comes mainly from the capitation fee adjusted for age or other factors (e.g. chronic cardiovascular disease, diabetes or living in a residential home). A small part of income is based on fee-for-service, paid mainly for preventive programmes, financed both by the National Health Fund and local authorities. The gross annual income of a GP with 1600 patients on their list is about €38 400, and this includes costs of the practice (premises, personnel, basic additional examinations) (Ministry of Health, 2009). However this figure can rise significantly with an increase in the patients' list, involvement in preventive programmes or acceptance of extra duties (e.g. out-of-hours care). Although official data about net income of mid-career GPs is lacking, it can be estimated to be equal to the income of an internist or ENT surgeon, much higher than the income of any nursing or midwife staff, but lower than the income of an gynaecologist, ophthalmologist, neurologist or surgeon (see Fig. A22.1) (Stefanska & Szarkowska, 2009).

**Fig. A22.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



Source: Stefanska and Szarkowska, 2009, in addition to expert interviews.

### 2.3 Primary care workforce development

All insured inhabitants have direct and unlimited access to primary care physicians (family doctor or internist and paediatrician), dentists, primary care nurses and community midwives. Referrals are not needed to visit psychiatrists, oncologists, dermatologists or ophthalmologists, however their services are not considered to be part of primary care services (Act on Health Services Financed with Public Funds, 2004). Primary care physicians should be available to their patients 10 hours daily from Monday to Friday, excluding official holidays, which usually means 50 hours per week (Ministry of Health, 2009). No reliable data are available about the current ages of professionals providing primary care. Although financial remuneration of primary care physicians is relatively attractive (especially for the self-employed), general practice is one of the less popular career choices among medical graduates (Windak et al., 2009). Family medicine belongs to the group of so called “deficit specialties”. The government offers special financial incentives to attract young doctors to this medical field. These efforts have had some effect, reflected in the 27% increase of family physicians between the years 2003 and 2006 (see Fig. A22.2). In the same period the number of other specialists rose by a lower proportion. In 2007, professionally active specialists of family medicine constituted 10% of the group of all active medical specialists (Centrum Systemów Informacyjnych w Ochronie Zdrowia, 2004, 2008). There are no data available from studies on primary care workforce capacity needs and development in the future.

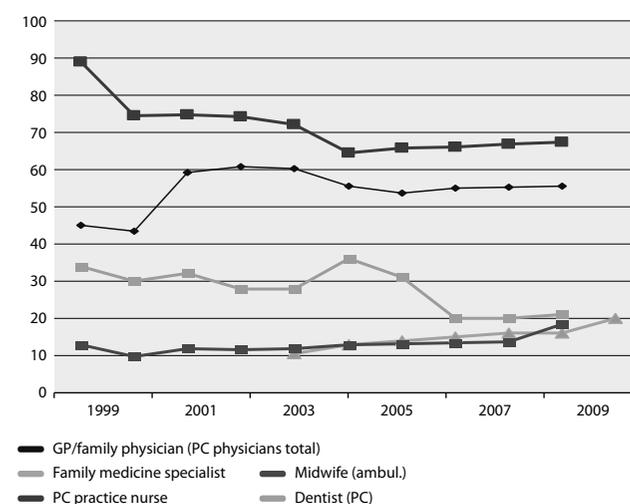
Family medicine is taught at 12 of the total 13 university medical schools both at pre – and postgraduate level. All universities have at least one department of family medicine. Medical students have to follow at least 100 hours of training in family medicine. Vocational training in this field lasts 48 months, of which 26 months are spent in family practice. There is also specialist training for family nurses lasting 665 hours (Centrum Medyczne Kształcenia Podyplomowego, 2003; Ministry of Health, 2005).

Several professional organizations are active in primary care. The College of Family Physicians in Poland, established in 1992, is active in the field of practice and system organization, quality assurance, education and research. The Polish Society of Family Medicine is active mainly in education and research, while the Federation of Unions of Employers in Health Care “Porozumienie

Zielonogórskie” (Zielona Gora Agreement) defends financial and material interests of family doctors, mainly those acting as independent contractors.

The family medicine journal *Problemy Medycyny Rodzinnej* [Topics in Family Medicine] is peer reviewed and published quarterly with 2000 copies per issue. None of the nursing journals is specially dedicated to primary care nurses.

**Fig. A22.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Sources: Ministry of Health, 2009; Narodowego Funduszu Zdrowia, 2009; and expert interviews.

## 3. Primary care process

### 3.1 Access to primary care services

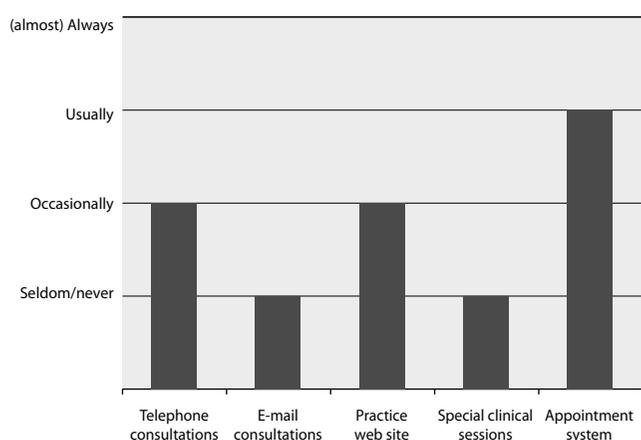
In 2009 there were about 20 vocationally trained family physicians per 100 000 inhabitants, with significant variation between the regions. Internists and paediatricians also provided primary care services (about 55 physicians per 100 000 population worked in primary care). Additionally, 67 primary care nurses and 18 community midwives per 100 000 inhabitants were available in 2008 (Centrum Systemów Informacyjnych w Ochronie Zdrowia, 2009a). There are no data available about differences between urban and rural areas, although expert opinion suggests there is no shortage of primary care physicians and access to rural pharmacies is judged sufficient.

General practices and other primary care centres are obliged by law to be open each weekday from 8.00 a.m. to 6.00 p.m. (Narodowego Funduszu Zdrowia, 2009).

Fig. A22.3 shows the extent to which a number of organizational arrangements commonly exist in primary care practices or centres. Appointment systems are widely available for the majority of patient contacts (Dobrev et al., 2008). Out-of-hours care can be contracted directly with specialized services or with primary care physicians, who can perform these duties on rota with the neighbouring practices or subcontract with the deputizing service. E-mail consultations and special consultations for certain patient groups are rare.

Both office and home consultations are free of charge for insured patients. The same applies to specialist consultations if a referral letter is issued. Certain specialists are accessible by law without referral. In general, 90% of patients judge the access to primary care physicians as easy (Paczkowska, 2009).

**Fig. A22.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Sources: Dobrev et al., 2008; Marcinowicz, Konstantynowicz and Chlabicz, 2008.

### 3.2 Continuity of primary care services

Patients have free choice of primary care physician, nurse and midwife. All these professionals have their personal lists of patients (Act on Health Services Financed with Public Funds, 2004), with an average list size of 1539 patients in 2009. Eighty-five per cent of patients reported in 2008 visiting their usual primary care providers for their common health problems (Paczkowska, 2009). The majority of patients (86%) are satisfied with their relation with their primary care physician (Marcinowicz, Konstantynowicz & Chlabicz, 2008).

All primary care providers are obliged to keep clinical records for all patient contacts (Act on Patients' Rights

and Patient Rights Spokesman, 2009), though only one-third regularly use an electronic record-keeping system. Computers in primary care centres are primarily used for administrative purposes (Dobrev et al., 2008).

When referring a patient to a specialist, a primary care physician should issue a written referral letter (Act on Health Services Financed with Public Funds, 2004). In return, specialists should give written feedback to the primary care physician. However they do this only occasionally, since by law they are obliged to do it once a year at least. Information about the services provided within out-of-hours care reaches the family physician even more rarely, mainly in cases when these services are subcontracted by him/her.

### 3.3 Coordination of primary care services

Without a referral, patients can see a family doctor or other primary care physician, a dentist and community nurse or midwife. A referral letter is also not required for a gynaecologist, dermatologist, ophthalmologist, psychiatrist or oncologist, although they are not recognized as primary care specialists. To visit all other specialists patients normally need referral letters (Act on Health Services Financed with Public Funds, 2004), which can be issued by a primary care physician and also by other specialists contracted by National Health Fund. In some cases even a discharge hospital letter can be regarded equivalent of the referral letter.

Most of the primary care providers work in health centres or group practices. In 2009 only 6% of primary care physicians ran solo practices. Primary care professionals usually work in teams and family doctors have regular face-to-face contacts with practice and community nurses and midwives. Direct contacts with physiotherapists and community pharmacists are rare. Community nurses rarely are involved in group education (e.g. diabetes clinics), however they usually provide individual health counselling, for example on healthy diet. Clinical specialists usually provide their services in separate hospital outpatient settings and rarely visit primary care physicians in their practices.

Primary care providers are obliged to report the occurrence of certain infectious diseases to the Regional Sanitary Inspection body (Act on Fighting and Prevention of Communicable Diseases in Humans, 2008). Nevertheless, medical records are rarely used to identify health needs or priorities for health policy. Incidentally,

community health surveys are conducted nationwide to improve the quality and responsiveness of primary care (Kawecka-Jaszcz, Posnik-Urbanska & Jankowski, 2007).

### 3.3 Comprehensiveness of primary care services

Primary care practices have to follow the National Health Fund regulations related to the standard equipment availability. In all settings infant and adult scales, glucose tests, dressing and bandages, ECG machines or instruments for stitching wounds are available (Ministry of Health, 2009; Narodowego Funduszu Zdrowia, 2009). Most of the practices have also otoscopes, while gynaecological speculums or peak flow meters are only occasionally available.

Table A22.2 provides an overview of the primary care providers' involvement in the delivery of various primary care services.

Primary care providers offer a relatively small range of first-contact care services. A child with a severe cough or hearing problem most probably would be seen by either a family physician or paediatrician as first-contact care provider and this open access approach applies also to problems such as a breast lump or depression.

Primary care physicians are heavily involved in the treatment and follow-up of diseases. Patients with chronic diseases (for example, pulmonary problems, uncomplicated diabetes mellitus or mild depression) are almost always followed by their primary care physicians. Older people admitted to residential homes are always followed by their family physicians.

Minor surgery procedures are very rarely performed by primary care physicians.

Routine child surveillance is almost always performed by primary care physicians who are responsible for the whole children's immunization programme and they also provide immunization for tetanus or vaccinate high-risk adult patients against influenza. Lifestyle counselling (e.g. related to obesity or smoking cessation) is usually provided by primary care physicians in collaboration with community nurses (Ministry of Health, 2009; Narodowego Funduszu Zdrowia, 2009).

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

There are few data available indicating the quality of primary care services in Poland.

Although national data are lacking, results of one small-scale local study shows that ambulatory physicians (doctors and accredited specialists) issue prescriptions for 20 DDD of antibiotics per 1000 patients per day (Dziurda et al., 2008; OECD, 2009).

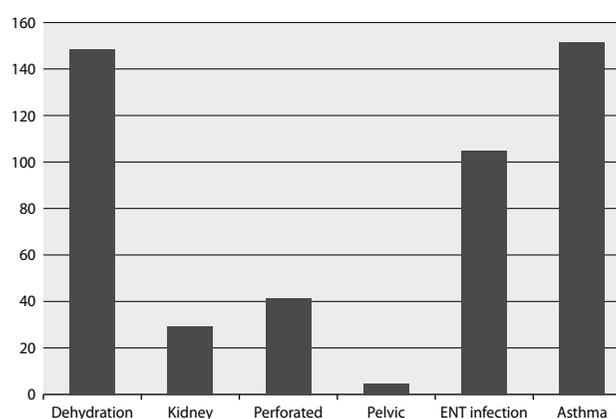
Concerning the quality of chronic disease management, results for the adult diabetic population:

- 52% had cholesterol level > 5 mmol/l (in 2004)
- 85% were overweight or obese (in 2004)
- 34.1% had HbA1C > 7.0% (in 2008) (Cebolla & Bjornberg, 2008; Fabian, 2005; Fabian et al., 2008)

These numbers are relatively high, indicating room for improvement.

Childhood vaccination rates (including diphtheria, tetanus and pertussis for example) are all above 98% (Czarkowski et al., 2009). This is much less the case for vaccinations of the elderly against flu. In 2007/2008 only 46% of people 65+ years of age were vaccinated against influenza (Blank, Schwenkglens & Szucs, 2009).

**Fig. A22.4:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



Sources: Kupczyk et al., 2010; National Health Fund, unpublished data, 2008.

Unpublished data of the National Health Fund for the year 2008, indicating the numbers of hospital admissions

**Table A22.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> </ul>	<ul style="list-style-type: none"> <li>• Woman aged 18 asking for oral contraception</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Man aged 28 with a first convulsion</li> <li>• Man with suicidal inclinations</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>
<i>Treatment and follow-up of diseases</i> (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Congestive heart failure</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Rheumatoid arthritis</li> <li>• Mild depression</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Wedge resection of ingrown toenail</li> <li>• Removal of sebaceous cyst from hairy scalp</li> <li>• Wound suturing</li> <li>• Excision of warts</li> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from the cornea</li> <li>• Joint injection</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Allergy vaccinations</li> <li>• Testing for sexual transmitted diseases</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Routine paediatric surveillance of children up to 4 years</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

in selected primary care sensitive conditions are presented in Fig. A22.4 (asthma data are from 2004). Relatively high hospital admission rates occur in Poland for patients with a diagnosis of asthma, dehydration and ENT infection.

#### 4.2 Efficiency of primary care

Data on the efficiency of primary care services is very limited.

A regional study shows that the average length of a family doctor's consultation is 10 minutes (Blank, Schwenkgenks & Szucs, 2009; Pawlikowska et al., 2010). Eighty-eight per cent of the population reported being satisfied with the time available during a consultation with the primary care physician (Marcinowicz, Konstantynowicz & Chlabicz, 2008).

On average, a family medicine specialist provides 3.78 consultations per capita per year (National Health Fund, 2008).

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# 23 Portugal

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## 1. The context of primary care

### Country and population

Located in south-west Europe, the Portuguese territory has a continental region, with an area of 88 966.7 km<sup>2</sup>, and the archipelagos of Azores and Madeira, situated in the Atlantic Ocean. Bounded by the Atlantic Ocean to the west and south, the continental territory has a coastline of 1411 km and a land frontier of 1320 km with Spain, to the north and east. The estimated Portuguese population for 2009 is 10.64 million, with 5.15 million men and 5.49 million women, and with 1.6 million people aged from 0–14 years and 1.9 million people older than 65 years. The population distribution corresponds to an average population density of 115 inhabitants per km<sup>2</sup>. There is a higher population density in coastal areas where the main urban centres are located.

### Development and economy

Portugal has been a nation since 1143, a republic since 1910, a democracy since 1974, and joined the European Community in 1986. Total expenditures on health, both as a percentage of GDP and on a per capita basis, have increased significantly over the past decade. Health care expenditures have risen from 8.0% of GDP in 1996 to 10.0% in 2007, 1% more than the average (9.0%) across OECD countries (OECD, 2010). Despite spending a high proportion of its GDP on health, Portugal spent only US\$ 2151 on health per capita in 2006, a lower figure than the OECD average of US\$ 3060 in 2008

**Table A23.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Portugal	EU <sup>1</sup>	Portugal	EU <sup>1</sup>	Portugal	EU <sup>1</sup>	Portugal	EU <sup>1</sup>	Portugal	EU
1995	7.8	7.6	1014	1275.9	391.7	740.9	292.6	292.7	51.6	27.5 <sup>6</sup>
2000	8.8	7.9	1511	1608.0	380.5	669.0	317.8	295.1	48.4	28.3 <sup>5</sup>
2005	10.2	8.5	2100	2150.9	353.9	604.6	342.6	316.0	49.0	26.3 <sup>4</sup>
2009	9.9 <sup>7</sup>	8.8	2151 <sup>7</sup>	2788.2	336.7 <sup>8</sup>	564.8	377.1	321.6	50.4	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Portugal	EU <sup>2</sup>	Portugal	EU <sup>1</sup>	Portugal	EU <sup>1</sup>	Portugal	EU <sup>1</sup>
1995	n.a.	575.1	9.8	12.5	11.1	15.7	3.2	6.6
2000	366.6	655.9	9.2	10.3	10.8	17.7	3.5	6.8
2005	456.5	682.7	8.7	9.5	11.2	16.2	3.9	6.8
2009	533.9 <sup>8</sup>	745.5	8.2 <sup>8</sup>	8.8	11.2 <sup>9</sup>	15.6	4.5 <sup>8</sup>	6.9

Sources: EU and Portugal average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year 2006. <sup>8</sup> Year 2008. <sup>9</sup> Year 2007.

(adjusted for PPP). The Human Development Index is 0.897 and the unemployment rate was 9.6% in 2009 (UNDP, 2009).

### Population's health

Portugal reached the last quarter of the twentieth century with the lowest indicators among European countries in terms of economic, education and health indicators but enjoyed substantial improvements in the health status of its population over the last 25 years (Instituto Nacional de Estatística, 2010). The average life expectancy at birth has converged with the EU average: in 2006 it was 79.0 years while the average for the EU15 was 80.31 years. In 2008 it was 79.3 years in Portugal, which corresponds to the OECD average (79.4). The infant mortality rate, as in other OECD countries, has fallen significantly over the past decades. It stood at 3.3 deaths per 1000 live births in 2008, compared to an infant mortality rate of 24.2 per 1000 in 1980. The fertility rate was 1.3 in 2007. Of total deaths in 2008, 32.3% were caused by diseases of the circulatory system (including ischaemic heart disease and cerebrovascular accidents) and 22.9% by malignant neoplasms (all types), these being the two main causes of death in Portugal for the last two decades. Nevertheless, these causes performed differently, with a clear upward trend of deaths caused by malignant neoplasms and a

downward trend in the share of deaths caused by diseases of the circulatory system. However, the standardized death rates for these diseases were substantially lower than the averages for EU27 Member States in 2006. There are significant reductions in mortality rates for key causes of premature mortality, such as heart disease and stroke, but no change or some increase in rates for others, including cervical, colon and rectal cancers, suicides and alcohol-related deaths (OECD, 2010). According to the results of the Fourth National Health Survey 2005/2006, 53.4% of the population residing in Portugal considered their health condition as very good or good. The most frequent chronic disease was high blood pressure, reported by 19.8% of residents in Portugal, while rheumatic diseases and chronic pain were reported by approximately 16% of residents. Asthma, affecting 5.5% of the total resident population, has been the most frequently mentioned problem (4.9%) within the youth population group (aged less than 15). Weight-related problems were mentioned by over half of this age group, approximately 36% compatible with overweight and 15.2% with obesity. In the same period, 19.7% of resident population aged 10 and over smoked, and 17.6% of them did so daily (Direcção-Geral da Saúde, 2008).

## Characteristics of the health care system

The Portuguese National Health Service (NHS) establishes the right of all citizens to health protection; a guaranteed universal right to health care (mostly free at the point of use) through the NHS for all citizens regardless of economic and social background. In the Portuguese Constitution the NHS is defined as “universal, comprehensive and approximately free of charge”. The Portuguese health system is primarily funded through taxation and 71.5% of health spending was funded by public sources in 2006, slightly below the OECD average of 72.8% in 2008 (OECD, 2010). Patients in Portugal participate in health care financing via co-payments and co-insurance. In 2006, spending on pharmaceuticals accounted for 21.8% of total health, above the OECD average of 17.1%. Private out-of-pocket payments as a percentage of total health care spending have been in the range of 20–23% since the late 1990s. By comparison, most of the EU15 countries have rates below 17%. Total health care expenditures per capita have grown from €1014 in 1995 to €2151 in 2006 (see Table A23.1) (WHO Regional Office for Europe, 2010). The proportion of health care spending devoted to primary care has not increased since 2001; in fact, public spending on primary care has decreased, while the overall level has been maintained by an increase in private spending.

Over the past decade, the indicators on the health sector (shown in Table A23.1) kept up the main trends for the series. Again, indicators on human resources slightly increased in 2008, more significantly as regards nurses. The number of available beds also decreased, while an increase in the number of hospitalizations – but a decline in the days spent as an inpatient – and an increase in medical appointments occurred.

## 2. Structure of the primary care system

### 2.1 Primary care governance

In the early 1970s, Portugal was one of the first European countries to adopt an integrated approach in primary health care through the development of an impressive health centre network. Since 1979, Portugal has an NHS with about 350 health centres and almost 2000 small health units covering most of the national territory. GPs' patient lists of around 1500 people are the basis of the health centres, organized in a similar way all around the

country. Places for young doctors to work in the NHS are determined by the Ministry of Health taking into account the local needs.

By the end of 2005, a major primary health care reform was initiated titled “Mission Unit for the Reform of Primary Health Care”. The Minister of Health was responsible for the implementation of the reform, which included the coordination and tracking of the health centres' reconfiguration strategy and the implementation of family health units.

The Ministry of Health published in January 2006 a policy paper “Priorities for the development of primary health care” and in 2007 the Strategic Plan 2007–2009 covering three main areas: (1) change and organizational quality, (2) clinical governance and knowledge management, and (3) sustainability and development (Ministério da Saúde, 2006, 2007b). The main goals of the reform of primary health care were: improving access, increasing satisfaction for professionals and users, improving quality and continuity of care and improving efficiency.

The reconfiguration of the health centres consisted of a double action: first, the establishment of small functional independent family health units, providing health care closer to the citizens and offering better quality of service; second, to achieve simultaneously aggregation of resources and management structures, leading to economies of scale and creating for management purposes and clinical governance the Group of Health Centres (Ministério da Saúde, 2004, 2006, 2007b; Pisco, 2008).

Portugal has five health regions responsible for allocating the resources to hospitals and primary care. They have contracting departments to discuss with the hospitals and groups of health centres their budget. At this regional level, the primary care budgets are independent of other areas (Ministério da Saúde, 2008).

The health centre groups (74 in total at national level) are responsible for a population of between 50 000 and 200 000. All primary care providers work under this network of health centres. Each health centre group is based on five family health units with multi-professional team work, with joint and complementary work divisions organized in a network with specific aims. The administrative independence to decide and implement solutions is adapted to the available resources and to

the circumstances of each place and community, as is the use of the appropriate organizational structures and instruments for management. There is a clearly defined leadership and clinical and technical governance systems; and representation and participation mechanisms are in use for the community and citizens (Ministério da Saúde, 2007c, 2008).

At the provision of care level, the family health units, which are small multi-professional teams, consisting of 3–8 family doctors, an equal number of family nurses and administrative professionals, provide primary care services to a population of between 4000 and 18 000. These teams have technical, functional and organizational autonomy, they provide accessible care and they are remunerated by a mixed payment system (consisting of a mix of capitation / salary / professional incentives) that rewards performance, and which is sensitive to productivity and accessibility, but also quality of care (Ministério da Saúde, 2007c, 2008).

All the GPs working as civil servants for the NHS must be members of the General Medical Association (Ordem dos Médicos) and be trained as specialists in family medicine. They must have completed the vocational training in family medicine (four years' duration). In addition to the family health units, there are primary care centre facilities in place. The primary care centre facilities vary widely in structure and layout: some were purpose-built to a reasonable size, with a rational distribution of space, and discrete areas for different purposes; some, mainly in large cities, were incorporated into residential buildings and are poorly designed and not patient-friendly. The majority of the new family health units have good facilities rearranged or specially designed for purpose, and it is mandatory for these kinds of facilities to comply with the general law on health and safety. The Ministry of Health has a General Directorate solely for facilities and equipment in health and in November 2006 they published the new guidelines for building or adapting new family health units.

## 2.2 Economic conditions of primary care

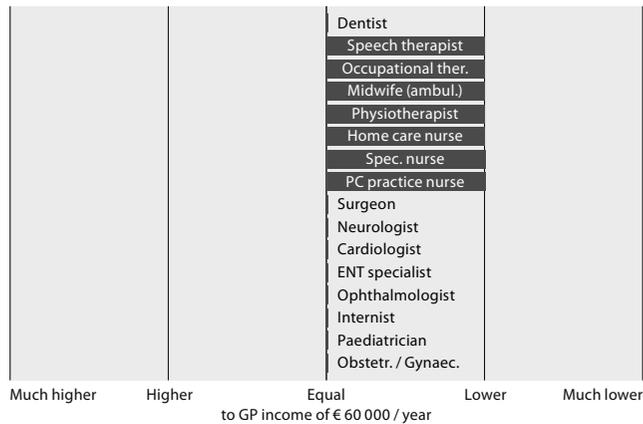
Primary health care in the public sector is mostly delivered through publicly funded and managed primary care centres. Each of them covers an average of 28 000 people, although some cover more than 100 000 people and others fewer than 5000 people. They employ a total of 30 000 professionals.

Health centres are responsible for delivering primary health care. They do not yet have financial or administrative autonomy. The Ministry of Health allocates funds to the five regional health authorities, which in turn fund the global activity of each health centre through the groups of health centres. The health centres only receive a small budget for rent, utilities, etc., based on historical costs. All other costs are directly paid by the Group of Health Centres coordination level. All NHS doctors are salaried government employees. The fixed salary is established according to a matrix linking professional category and duration of service, independently of any productivity measure. There are three employment levels for doctors: a GP in Portugal can choose to work 35 hours for the NHS and can do some private work, to work 35 hours but only for the NHS and has a better salary, or 42 hours and exclusively for the NHS. Around 70% of the GPs are in this last situation.

A GP working 35 hours can have an annual income of around €35 000 and for 42 hours around €60 000. In the NHS the different specialties have the same salary (see Fig. A23.1). The difference lies in the number of years of a GP has worked work and the level they have reached in their career. The problem is that 70% of the GPs only work for the NHS while only 30% of hospital specialists do so and, on a private basis, they earn in general much more than in the NHS.

The traditional fixed salaries gave way to a new mixed payment system consisting of elements of capitation, salary, specific treatment objectives, and professional incentives that reward merit (performance based), and is sensitive to productivity and accessibility, but also, quality. The number of patients on the GP's list and the levels of performance are also reflected in structural and individual rewards. Not all family health units contract the same package of indicators – depending on their specific context, on their degree of development and on the capabilities of their information systems, but the main areas are access, practice performance, quality perception and economic performance. An institutional incentive is also paid to the family health units that comply with their contracting goals. This incentive can be spent on documentation, amenities, improvement of infrastructure, equipment and professional qualification (Ministério da Saúde, 2007c).

**Fig. A23.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

The primary care centres' purpose is to respond to the health needs of their population, including health promotion and health vigilance, prevention, diagnosis and disease treatment through planning and providing care to the individuals, family and community, as well as the development of specific activities to address situations of greater risk or health vulnerability.

The range of services provided by GPs in primary care centres is, among others (established by law), general medical care for the adult population, prenatal care, children's care, women's health, family planning and perinatal care, certification of incapacity to work, home visits, preventive services, including immunization and screening for breast and cervical cancer and other preventable diseases (Ministério da Saúde, 2007a).

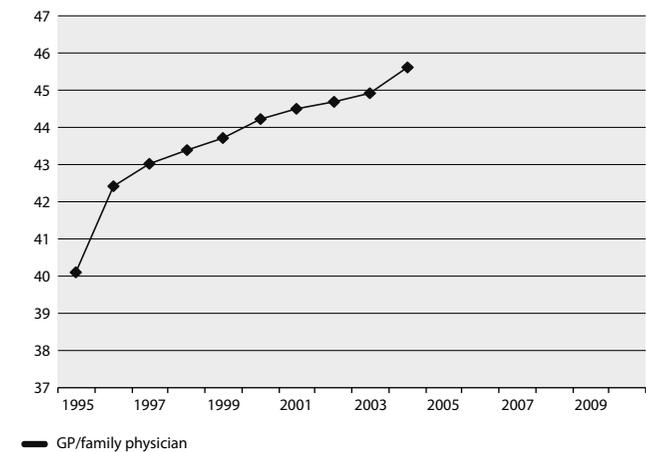
Primary health care is predominantly delivered by GPs/family doctors and primary care nurses in the primary care centres' setting. The majority of GPs (65%) are 45–55 years of age. Fig. A23.2 shows the steady increase in supply of GPs over the years.

Some primary care centres also provide a limited range of specialized care. This is a result of the integration of social welfare medical services into the NHS at the beginning of the 1980s. Specialists who had worked for the Department of Social Welfare were transferred and given contracts in the newly established NHS primary care centres. The specialists who work in primary care centres belong to the so-called ambulatory specialties, such as mental health, psychiatry, dermatology, paediatrics, gynaecology and obstetrics, and surgery.

The number of places open for vocational training in general practice is established by the Ministry of Health and between 2006 and 2009 it was around 30% of the total amount of places (in 2009 this was 318 out of 1026 places). General practice as an academic discipline is very well established in all medical faculties of the country, with academic departments and undergraduate and postgraduate training (Ministério da Saúde, 2009).

The Portuguese Association of General Practitioners (APMCG) has been in existence for more than 25 years; it publishes a scientific journal and a general practice newspaper and organizes many training initiatives.

**Fig. A23.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Source: Eurostat, 2010.

## 3. Primary care process

### 3.1 Access to primary care services

Primary care services are available in all regions of Portugal, ensuring health care access to every citizen. According to the latest official statistics from the National Health Plan, there were 62.7 family physicians per 100 000 inhabitants in 2007. A regional analysis of the ratio of family physicians per capita shows some asymmetries. The central region of Portugal has the highest rate with 71.4 GPs per 100 000 inhabitants. The region of Lisbon and Tagus Valley has the lowest ratio of GPs per capita with 58.2 per 100 000 inhabitants. At a smaller administrative level (towns), the lowest density is 39.2 GPs per 100 000 inhabitants and the highest is 96.6 GPs per 100 000 inhabitants. The asymmetry does not reflect urban/rural differences. There is shortage of

GPs in the suburban areas of Lisbon, Oporto and Braga (urban towns) as well as some rural towns of Alentejo and Algarve (Alto Comissariado da Saúde, 2010a, 2010b).

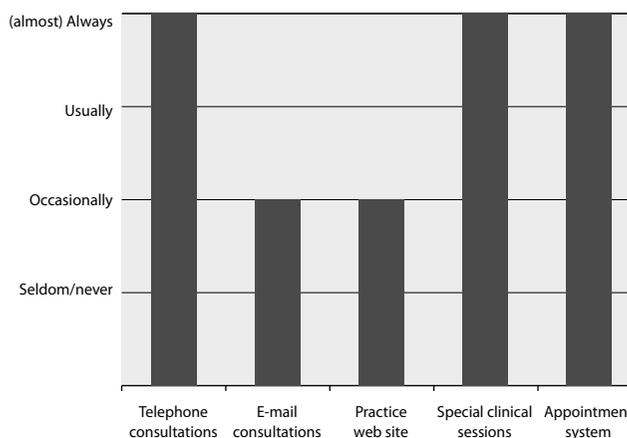
Primary care practices are open from 8 a.m. to 8 p.m. Monday to Friday. The after-hours service is practice-based. GPs within one practice or organized in a group of practices look after their patients on out-of-hours schedules. The scheme of after-hours primary care is uniform all over the country. The only difference between regions is the opening hours, depending on the distance to the nearest emergency hospital department. When the hospital is nearby, after-hours primary care is opened only for the evening; when the hospital is distant, after-hours primary care services are available all night.

The average number of home visits was 0.4 per week per GP in 2006 (latest available official statistics). The number of home visits has however increased in the last three years, as GPs in family health units are being paid for each home visit to a maximum of 20 visits per month (Direcção-Geral da Saúde, 2007a).

From 2007, informatics hardware and software have been progressively implemented in primary care practices all over the country and the number of e-mail consultations and practices' web sites is increasing (see Fig. A23.3).

The Portuguese NHS established the right of all citizens to health protection, mostly free. A small co-payment consists of a tax for every visit within the NHS. Patients with a low economic status, children, pregnant women, family planning related visits, chronic patients, blood donors and firemen are exempted from any co-payments. In 2007, 37% of patients rated general practice care as not very or not at all affordable and 67% found it easy to reach and gain access to GPs (European Commission, 2007).

**Fig. A23.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Source: Dobrev et al., 2008.

### 3.2 Continuity of primary care services

Portuguese GPs have a patient list system and the size of the lists ranges from 1500 to 2000 patients. In theory, patients are free to choose the primary care centre and the GP, but in reality choice is limited by the shortage of GPs in certain regions. The percentage of patients satisfied with their GP is on average 75% (see Fig. A23.4) (Ferreira, Antunes & Portugal, 2009).

National statistics from 2005 indicate that 59.8% of patients visited their usual primary care provider, at least once a year, for their common health problems. Recent data (2008) from family health units report a higher rate of 66.9% (Administração Central do Sistema de Saúde, 2009; Ministério da Saúde – Instituto de Gestão Informática e Financeira da Saúde, 2006).

Electronic clinical records are kept for all patient contacts as electronic clinical support systems and Internet connections are available in all practices. Computers are also used for appointment booking, prescription, sick leave and referrals to medical specialists (Dobrev et al., 2008).

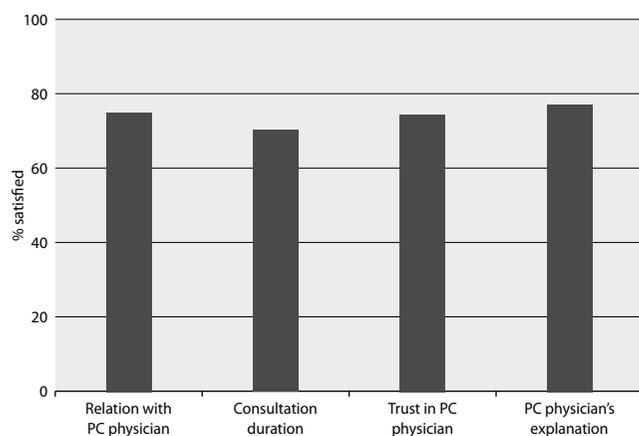
For referrals, GPs always write a document with relevant information on diagnostics tests and treatment performed that is sent to the specialist. After an episode of treatment specialists usually inform the GP about the diagnosis, procedures and treatments used. This feedback is less frequent from out-of-hours contacts. There are no systems for communication with pharmacies.

**Table A23.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 18 asking for oral contraception</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Woman aged 35 with psychosocial problems</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man with suicidal inclinations</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	–
<i>Treatment and follow-up of diseases</i> (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Congestive heart failure</li> <li>• Uncomplicated diabetes type II</li> <li>• Mild depression</li> </ul>	<ul style="list-style-type: none"> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Insertion of a IUD</li> </ul>	<ul style="list-style-type: none"> <li>• Wedge resection of ingrown toenail</li> <li>• Removal of sebaceous cyst from hairy scalp</li> <li>• Removal of rusty spot from the cornea</li> <li>• Joint injection</li> <li>• Setting up an intravenous infusion</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Testing for sexually transmitted diseases</li> <li>• Screening for HIV/AIDS</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Allergy vaccinations</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> <li>• Counselling in case of problematic alcohol consumption</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

**Fig. A23.4:** Patient satisfaction with aspects of care provision

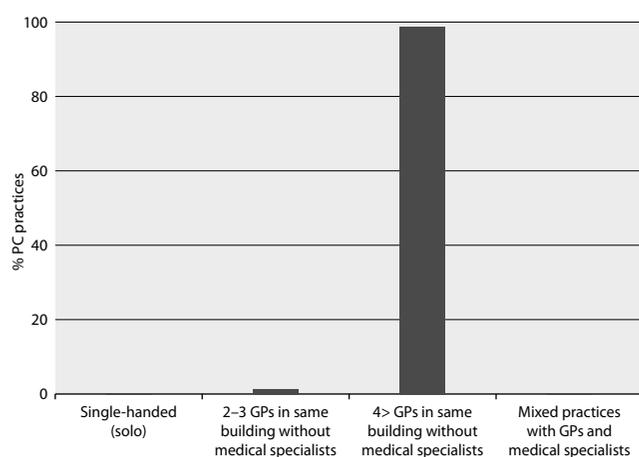
Source: Ferreira, Antunes & Portugal, 2009.

### 3.3 Coordination of primary care services

Within the NHS, patients need a referral from a GP to access other medical specialties. The only exceptions to this gatekeeping system are emergencies and out-of-hours visits to the hospital emergency department.

All primary care practices are group practices in which GPs share the same physical structure (see Fig. A23.5). In primary care practices regular face-to-face meetings of GPs are very common and team meetings with practice nurses usually occur. Nurse-led substitution of care, mainly in health education and prevention, is very common. Cooperation with secondary care and other services is not so frequent, but some practices have good experience with telemedicine and joint consultations. GPs rarely ask telephone advice from other medical specialists.

Data from patient records in general practice are used for epidemiological purposes and to identify health needs, mainly at a regional level (Ministério da Saúde, 2008).

**Fig. A23.5:** Shared practice

### 3.4 Comprehensiveness of primary care services

GPs in Portugal are known to be responsible for a wide array of primary care services at the community level. The comprehensiveness of the GPs' work has grown in the past years. Nowadays, GPs handle a vast majority of preventive activities, and most of the acute and chronic health problems of their patients (see Table A23.2).

The health centres are usually spacious, although some of the existing infrastructures are inadequate for patient access and need refurbishment. Almost all of them have the necessary equipment, such as infant scales, gynaecological speculums and instruments for stitching wounds. The ECG device exists in The majority of health centres have ECG machines but they are only occasionally used, mainly when a GP assesses a patient with an acute complaint.

The health centres are usually the first contact for common acute health problems, where patients can access their own GP during working weekdays. The range of acute health problems that the GP handles in the health centre is wide, ranging from gynaecological to obstetric complaints, minor wounds and trauma, and also mental health problems. During the night and at weekends, patients with acute complaints usually go to hospital emergency departments, which leads to an excessive use of the secondary health care services (Barros & de Almeida Simões, 2007). In some remote and rural areas emergency departments can be part of health centres, with GPs working during the night, but they are now an exception.

The GP is responsible for the chronic health problems of the Portuguese adult population. Only 5.56% of all general practice contacts are referred to secondary health care (Fleming, 1992). Some specific diseases require follow-up by hospital doctors, but patients still maintain a close contact with the GP for the regular preventive activities (immunization and oncology screenings for example) and to manage other common health problems.

Not only family planning, but also antenatal care is provided by GPs and nurses at the primary care level in the Portuguese NHS. There is a defined pregnancy surveillance scheme, and low-risk pregnancies are usually followed until the last weeks of pregnancy at the health centres (except for ultrasounds and lab tests). In urban areas, it is common to consult private gynaecologists/obstetricians for family planning and also for low-risk pregnancy surveillance (but outside of the NHS). This

occurs mostly if patients have voluntary private health insurance. After birth, neonates are scheduled to have checks carried out by the GP and nurse at the health centre from the first week of life until they reach 18 years of age. The National Vaccination Plan is fulfilled at the health centre and is one of the main tasks of primary care nurses. Parents may also consult private paediatricians for the routine surveillance of their child, either voluntarily or when there is no GP available in a specific region.

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

Portuguese primary care is facing an uplifting moment with regard to quality improvement and clinical audits. After the implementation of the electronic health records and due to the impulse given by the reform of primary care, primary care teams are now more accountable for their work and also for the outcome of their performance.

About 21.81 DDD/1000 inhabitants/day of antibiotics were prescribed by ambulatory physicians in 2007 (ESAC, 2009).

With regard to diabetes care in the primary setting, a study conducted between 2005 and 2007 by Falcão et al. (2008), revealed the following results for the diabetic population aged >25 years old:

- 47.8% had HbA1C >7.0%
- 47% had cholesterol >5.2 mmol/L (or 200 mg/dL)
- 16.9% had blood pressure below 130/80
- 16.1% had the BMI measured in the last 12 months, if they were overweight or obese
- 48.7% had an eye fundus inspection in the last 12 months.

The number of hospital admissions for patients with asthma was in 2007, 30.79 per 100 000 population per year (Bugalho de Almeida et al., 2009).

As of 2009, the National Health Plan for 2011–2016 is being formulated and the prevention of hospital admissions for primary care sensitive conditions will be taken into account. Increased availability and analysis

of data (at the moment still unavailable) and more involvement of primary care providers is expected in this area.

The National Vaccination Plan has a very high coverage in Portugal. All primary care professionals are involved in increasing awareness of it and its importance among the population. The last available coverage results (2009) show on average that 96% of the population is vaccinated for diphtheria, tetanus, pertussis, measles, hepatitis B, and for rubella 95% (WHO Regional Office for Europe, 2010).

For individuals aged 65 years or more with at least one chronic condition (pulmonary diseases, diabetes, cardiac diseases, hypertension, renal diseases or liver diseases), flu immunization coverage reached 52.2% in the period 2009–2010 (Branco & Nunes, 2009).

##### 4.2 Efficiency of primary care

Portuguese general practice develops its core activities in the health centre setting. In 2007, 5% of the contacts were home visits made by GPs (142 381 home visits out of a total of 28.48 million consultations) (Direcção-Geral da Saúde, 2007b).

The average length of a consultation at the health centre is 14.4 minutes (in 2002) (Nogueira, 2002).

The estimated rate of referrals from primary to secondary care is 5.56% of the general practice contacts (Fleming 1992). In 2009, the average number of contacts per patient per year was 4.2 (Ministério da Saúde, 2010).

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# 24 Romania

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Z. Farkas Pall*

## 1. The context of primary care

### Country and population

Romania is an east European country with an area of 237 500 km<sup>2</sup> (the 12th largest in Europe). It is a republic, led by a President and governed by a two-chamber Parliament consisting of the Senate with 153 members and the Chamber of Deputies with 343 members. Since 1989 Romania has gone through a period of rapid and major change in every sector. The process of economic reform has been gradual rather than radical. Many major businesses remain under state control and have yet to address the fundamental issues which enable business to survive and flourish in a competitive environment (Predescu, 2008; European Observatory on Health Care Systems, 2000).

The 1992 census identified a population of 22.79 million inhabitants with a density around 95.7 inhabitants per km<sup>2</sup>. In 2003 approximately 14% of the population was over 65 years of age, with another 18% of the population under 15 years of age. There were 95 males for every 100 females in the country in 2003. According to the UN, the annual population growth rate for 2000–2005 was –0.23% (UNECE, 2004). The population in 2010 was 21.46 million inhabitants.

### Development and economy

Romania is classified by the World Bank as a middle-income country with a gross national income (GNI) per

**Table A24.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Romania	EU <sup>1</sup>	Romania	EU <sup>1</sup>	Romania	EU <sup>1</sup>	Romania	EU <sup>1</sup>	Romania	EU
1995	3.8	7.6	n.a.	1275.9	769.5	740.9	176.5	292.7	n.a.	27.5 <sup>6</sup>
2000	5.1	7.9	n.a.	1608.0	658	669.0	192	295.1	36	28.3 <sup>5</sup>
2005	5.5	8.5	507	2150.9	658	604.6	195	316.0	n.a.	26.3 <sup>4</sup>
2009	n.a.	8.8	n.a.	2788.2	632 <sup>9</sup>	564.8	n.a.	321.6	n.a.	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Romania	EU <sup>2</sup>	Romania	EU <sup>1</sup>	Romania	EU <sup>1</sup>	Romania	EU <sup>1</sup>
1995	n.a.	575.1	10.3 <sup>7</sup>	12.5	n.a.	15.7	n.a.	6.6
2000	397.4	655.9	7.6	10.3	n.a.	17.7	n.a.	6.8
2005	397	682.7	8	9.5	n.a.	16.2	6 <sup>8</sup>	6.8
2009	397	745.5	n.a.	8.8	n.a.	15.6	5.9	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year 1994. <sup>8</sup> Year 2006. <sup>9</sup> Year 2008.

capita of US\$ 7930 in 2008 (Kozak, 2010). Romania's inflation rate reached a peak of 154.8% in 1997 and decreased to 15.3% in 2003, 10% in 2004 and 7% in 2007 (European Observatory on Health Care Systems, 2000). Between 1990 and 2007 Romania's Human Development Index rose by 0.37% annually from 0.786 to 0.837, which gives the country a rank of 63rd out of 182 countries with data (UNDP, 2009). A quarter of the Romanian population lives below the poverty line. This indicator of poverty is among the highest in the European region. From the economic perspective Romania is still in transition from the Soviet system.

Official data show that the Romanian unemployment rate rose to 7.6% in December 2009 (Eurostat, 2010). The total adult literacy rate in the period 2003–2008 was 98% (Unicef, 2010). The greatest proportion of illiterates are women and people aged 65 and over (Unicef, 2010). A recent study in a small industrial town of 250 000 citizens showed that 11% of population did not have a primary education. The national unemployment rate increased to 8.4% (765 285 people) in 2010.

#### Population's health

Total life expectancy of the total population at birth is 72.5 years, total life expectancy at birth of males is

69 years and of females 76.2 years (2009 estimate). The infant mortality rate was 9.46 deaths per 1000 live female neonates and 12.38 deaths per 1000 live male neonates in 2008. The age standardized death rate is more than twice that in the EU.

The specific mortality rates in 2008 were:

- circulatory diseases: 712.12 per 100 000 inhabitants;
- malignant neoplasms: 216.17 per 100 000 inhabitants
- digestive diseases: 71.86 per 100 000 inhabitants
- external injuries, poison: 59.52 per 100 000 inhabitants
- respiratory diseases: 57.24 per 100 000 inhabitants (National Institute of Public Health, 2010).

The maternal death rate is the second highest after the Republic of Moldova among the countries Bulgaria, Hungary, Moldova, Serbia and Ukraine. The infant mortality rate in Romania is the highest among the countries mentioned.

Health status data are routinely collected in a pyramidal-centralized system, from district level (42 district public health directorates) to the top hierarchical level

(Computing Centre for Health Statistics of the Ministry of Health and Family). The Computing Centre for Health Statistics performs a National Health Survey to evaluate morbidity indicators every 5–6 years (USAID, 2008). In Romania, cardiovascular disease and neuropsychiatric conditions are the first two causes of disability for men and women and represent most of the burden of diseases in the population (National Institute of Public Health, 2010).

#### Characteristics of the health care system

The implementation of the health insurance scheme in 1999 increased public health expenditure to 3.4% of GDP (in 1999) compared with 2.8% in 1998. Compared with other European countries, Romania still has the lowest percentage of GDP spent on health (Vlădescu et al., 2008). Eighty-five per cent of the population is covered by National Health Insurance House (18 million out of 21 million). The payment to the National Health Insurance House budget is mandatory for all Romanian citizens. Employers have to pay 5.5% of employees' wages and 5.6% of enterprise turnover annually. Freelancers have to pay 5.6% of their income, and other categories of people 5.5% of minimum wage. Preventive medicine, primary care services, ambulatory care, hospitalization, home care services, a part of drug costs – are covered by the National Health Insurance House budget. Primary care services, ambulatory services on secondary level and hospitalizations are formally free of charge. Co-payment is required for drug prescriptions, some ambulatory investigations, some laboratory analysis, some high-level hospital investigations and cosmetic surgery. The funds allocated for public health expenditure increased from €2.1 billion in 2004 to €4.3 billion in 2007. Although the health budget is expected to increase to 6% of GDP in the near future, Romania will spend less money on health than the other Member States of the EU, in both relative (GDP share) and absolute terms (Pîrvu, 2008). Unable to support the costs of the numerous centrally controlled health care facilities, the government has announced further health care reforms, specifically targeting the decentralization of the public health care facilities, as well as an increased efficiency and transparency in the allocation of existing scarce resources. This decentralization strategy has been defined and approved in 2009 through a Governmental Decision (Decision no. 562/2009) (Filipescu, 2009).

Medical services in Romania are supplied by a network of public units made up of hospitals, polyclinics,

dispensaries, sanatoria and drugstores. Two terms are used for primary care doctors: family physician and GP. Family medicine is a recognized medical specialty in primary care. In primary care, all the doctors are family physicians (which is not a professional title). Most of them are specialists in family medicine (having completed a postgraduate vocational training lasting three years). A minority of family physicians are not specialists in family medicine, but GPs (physicians who have not graduated from the vocational training) who were accredited as family physicians (having the competence to work in family medicine offices) before the year 2005.

The process of health service privatization extended over the period 2000–2006, so that the private health network expanded in 2005–2006. According to the National Health Insurance House (NHIH) database (NHIH, 2009) there were 11 743 family physicians who have contract with the NHIH and 2452 health care providers from other ambulatory specialties who have a contract with the NHIH. The total number of NHIH contracts with pharmacies was 4626 (year 2008). The average number of community pharmacists was 23.13 pharmacists per 100 000 inhabitants. There were 3502 pharmacies in urban areas and 1124 pharmacies in rural areas. The number of pharmacists for 10 000 inhabitants in 2003 was below the minimum values of some EU countries (35.86) (Pîrvu, 2008).

Table A24.1 compares the development of health resources and utilization in Romania with the EU averages.

## 2. Structure of the primary care system

### 2.1 Primary care governance

Within the Romanian Ministry of Health the responsibility for primary care lies in the General Directorate for Public Health, Medical Assistance and Programmes. There is no special department for primary care. The development of primary care multidisciplinary teams is a vision mentioned by the Presidential Strategy of health system development. The teams are expected to serve population groups of 3000–7000 individuals, according to the characteristics of the region – rural or urban (National Institute of Statistics, 2008). Payment for services is shifting away from funding based on input costs: primary care services are paid for by a mix of age weighted per capita budgets (70%) and fee-for-service

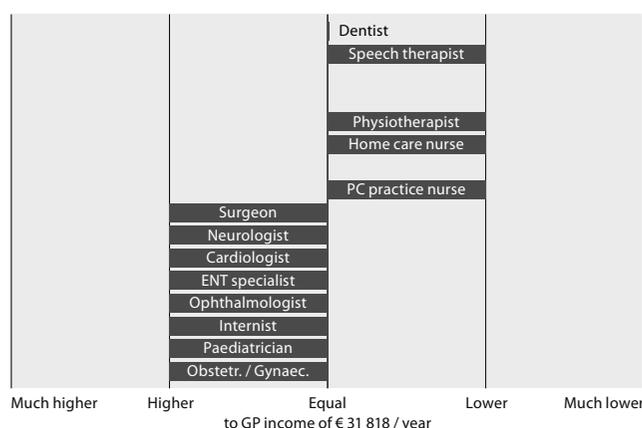
(30%). The National Framework Agreement for 2011 stipulates the payment should be 50% capitation fee and 50% fee-for-service. Current reforms (e.g. the Health Reform Law 2006) focus mainly on the continuation of the decentralization process, the development of the private sector and the establishment of clear relations between the systems of health and social care (Vlădescu et al., 2008).

## 2.2 Economic conditions of primary care

In 1994 a free choice of family physician was introduced together with a change in the payment method of the family physician from a salary to a mix of per capita and fee-for-service (Vlădescu et al., 2008; Florescu, 2006). The amount of the capitation fee is age related. The highest fee is allocated for children under the age of 1 year, while the lowest fee is allocated for patients between 5 and 59 years old. Included in the fee-for-service payments are: immunization; monitoring and check-up during pregnancy and early childhood (0–18 months); tuberculosis care; family planning and follow-up of patients with chronic diseases (diabetes, hypertension, cardiac failure). Each of these services has a number of points allocated every year. The value of points is adjusted yearly. Family physicians working in underserved areas earn additional points both for per capita and fee-for-service, even if the number of subscribed persons exceeds the 2000 limit. Family physicians can also raise points through further professional qualification, for instance 20% for senior family physicians. Family physicians who fail to pass the specialist exam are faced with a reduction by 10%. The NHIH assures the same wage for young/new doctors who start work as family physicians (about €300–350 per month, not including the practice expenses) during the first six months until they have the minimum number of patients required on their list (according to the Framework Agreement). After they have the minimum number of patients for their list (600 patients/list/doctor in rural areas and 1000 patients/list/doctor for urban), the doctors enter into the national health care providers system and are paid according to the number of patients on their list and the medical services they provided. The minimum of doctor's earnings (excluding practice expenses) could be €300–350 per month. In 2010, the President of the National College of Doctors, announced that 10% of Romanian medics have left or are in the process of leaving the country in that year. A young doctor makes on average €250 per month and a family physician about €350. The national medical system is already

chronically understaffed (Ciobanu, 2010). According to the Romanian College of Physicians, a resident doctor earns an average of €200 per month. NHIH payments to family physicians in 2008 totalled RON 1456 billion (€364 million) for 11 400 family physicians per year. The average annual income of a family physician is €31 818. Secondary medical specialists often earn more compared to the average GP (see Fig. A24.1).

**Fig. A24.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



## 2.3 Primary care workforce development

According to Eurostat (2010) in 2006 Romania counted 80.9 family physicians per 100 000 population.

Postgraduate training in family medicine was first introduced in 1990. All 12 (public and private) medical universities in Romania offer a three-year postgraduate training programme in family medicine. One year of this programme is spent in a primary care practice. There are 10 academic departments of family medicine: Bucuresti, Iasi, Cluj, Timisoara, Arad, Sibiu, Targu Mures, Craiova, Brasov and Constanta. Not all departments of family medicine are chaired by a professor. Currently (2010) the total number of professors in family medicine is eight.

The national examination must be passed to enter the vocational training in family medicine. Then a doctor studies and works as a resident physician for three years in big university hospitals in a range of specialties, together with one year in an urban primary health care unit (dispensary) for adults and children. After every stage a doctor has a written examination and a practical examination. After these three years of study and work, he/she has to pass the examination for the professional degree of “specialist” family physician, which includes a

written, a practical and an oral examination with a board made up of two medical university professors and a senior family physician (lecturer or trainer in family medicine).

Responsibilities of a GP involve diagnosis and follow-up of patients (including clinical management of medical, surgical, paediatric, old age care, psychiatric and obstetric cases). The responsibilities also include house calls and out-of-hours care, monitoring and support, therapeutic care and treatment, vaccinations and screening, and participating in quality improvement activities in the practice. Further, family physicians perform blood tests, smear tests and ECGs. Family physicians refer to specializing consultants and hospitals. They interpret laboratory and X-ray results, perform pregnancy tests, prenatal shared care, especially proactive antenatal care, preventive care, family planning, medical counselling and chronic disease management (see also Table A24.2).

Medical associations for primary care doctors are the National Society of Family Medicine (activities: professional development, education, scientific activities, legislation, rural medicine) and the National Trade Organization of Family Doctors (defending financial/material interests). There are two dedicated journals for family medicine in Romania: the *Romanian Medical Journal (Revista Medicala Romana)* and *Family Medicine (Medicina Familiei)*. The publication of the *Newsletter for Family Medicine* ended a few years ago. Currently, the Bucharest Family Doctors Association (AMFB) publishes its own newsletter quarterly (*Jurnalul Medicului de Familie – the Journal of Family Doctor*); in addition there is the *Romanian Medical Journal*. In October 2010 the National Society of Family Medicine started to publish the *Family Doctor Newspaper (Ziarul Medicului de Familie)*, which is a monthly periodical (Marginean, 2005). None of these newspapers are peer-reviewed.

### 3. Primary care process

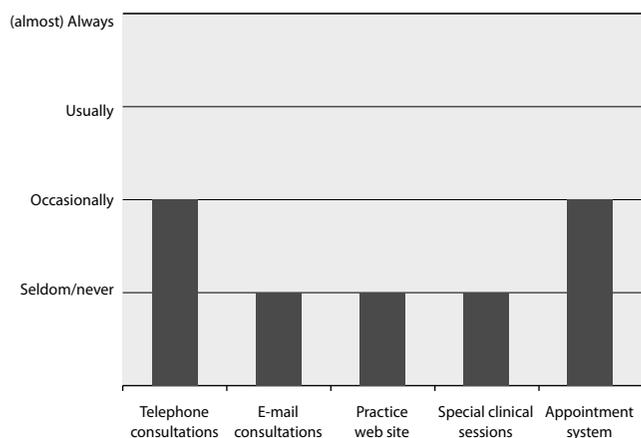
#### 3.1 Access to primary care services

In Romania the majority of the population is located in urban areas: 55.2% live in urban areas (320 cities and towns) and 44.9% live in rural areas (2860 rural communities). There is a lack of basic health care and people often have limited access to modern medical services in rural areas (Predescu, 2008). On average there are 53 family physicians per 100 000 inhabitants. In urban areas the density of family physicians is 1 family

physician per 1000 population and in rural areas the density is 1 family physician per 2500–3000 population. A shortage of medical professionals is especially evident in some counties in the east of the country and the Danube Delta. Under the Health Insurance Law, local councils can offer different incentives to physicians or nurses to provide services in underserved areas. The NHHH offers increased earnings (incentive) of between 20% and 100% for family physicians who work in underdeveloped or isolated rural areas. In order to promote universal access to medical services, family physicians have to provide medical assistance for all insured persons on their own list. In this way, in accordance with the basic medical services package, medical assistance is provided in case of emergency situations for everyone who needs these services; medical assistance is provided for those who are not insured and who do not pay any financial contribution to national social health insurance fund and also for those who optionally insure themselves, according to the law (Predescu, 2008).

There is unequal distribution of health care providers and reduced accessibility of health care services in rural communities. The number of family physicians may vary and depends on the level of local development (economic, infrastructure, etc.) and the size of the community (number of inhabitants). In urban areas, there is an excess of family physicians, often in big cities (county main towns) and university urban centres (e.g. Bucharest, Iasi, Cluj) (Predescu, 2008). The number of patient contacts per 1000 population is 2970, implying that patients on average have three contacts with their family doctor and that an average family doctor with a practice of 2000 patients would have almost 6000 patient contacts per year. While in 2009 appointment systems existed only occasionally (see Fig. A24.2), from 2010 it is mandatory to have an appointment system.

**Fig. A24.2:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres

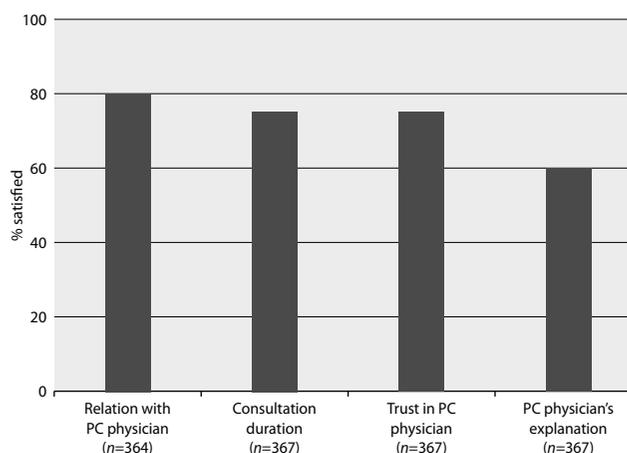


### 3.2 Continuity of primary care services

A family physician has on average a list of 1200–1500 (insured) patients. The minimum number of people subscribing to a family physician needs to be 1000 in order for the family physician to sign a contract with the Health Insurance House (HIH). In some areas the minimum of patients is decided by a local commission, according to the number of local family physicians. So the minimum of patients per family physician can be less than 1000.

Family physicians can be financially penalized if their patient list includes more than 2000 patients. All patients can freely choose any centre or family physician. Routinely keeping records of the medical information of patients is a major condition for quality and continuity of care, and is part of daily practice for most physicians. Retrieval of information is something different, but equally important. Eighty per cent of patients are satisfied with their relation with their primary care physician; 75% of patients are satisfied with the available time during consultations with their GP or primary care physician; while 75% of patients have trust in their primary care physician and 60% are satisfied with the explanation their primary care physician gives of problems, procedures and treatments (see Fig. A24.3).

**Fig. A24.3:** Patient satisfaction with aspects of care provision



### 3.3 Coordination of primary care services

Before the health care reform, district physicians referred a large proportion of patients to specialists or hospitals utilizing a high number of hospital beds. It was common to find a low quality of care, low patient satisfaction, rising costs, and a medical staff dissatisfied with the working condition and salaries. These factors were thought to contribute to the excessive prescription of pharmaceuticals, multiple referrals, overcrowding in hospitals and increasing costs.

Access to outpatient clinics and hospital specialty services now officially requires a referral. Almost all (90%) of patients visit their family physician with a new health problem before seeking specialist care. Reported referral rate (percentage of all office and home care contacts) is 11.3% (family physicians with specialized training), 8.8% (family physicians without specialized training), 8.9% (rural family physicians), 12.1% (urban family physicians). The total number of family physician consultations is increasing year by year. However, some compulsory referrals could be bypassed, but this is an exception, not a general rule.

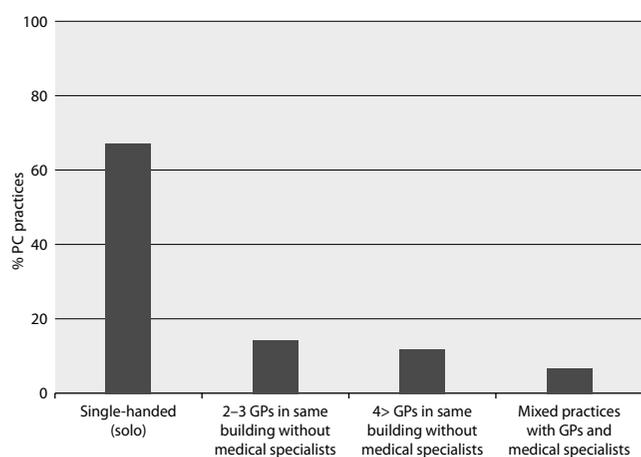
The majority of the family physicians work in single-handed practices (see Fig. A24.4).

**Table A24.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	–	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Congestive heart failure</li> <li>• Uncomplicated diabetes type II</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Excision of warts</li> <li>• Insertion of IUD</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> </ul>	–
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> </ul>	<ul style="list-style-type: none"> <li>• Counselling for healthy lifestyle changes</li> </ul>

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

**Fig. A24.4:** Shared practice

### 3.4 Comprehensiveness of primary care services

The clinical service profile of family physicians showed stronger and weaker areas. They appeared to be strong in the treatment of diseases, but the role as the first contact for varying health and related problems can be much improved. In particular, family physicians were obviously not the first contact for non-medical problems (i.e. social problems). There are relatively low levels of equipment in Romania. For example, primary care facilities only occasionally have an ECG machine, urine strips and peak flow metres. As noted in section 2.3, family physicians take care of a majority of chronic conditions. Occasionally they take care of people with mild depression and patients of who are admitted to nursing homes (see Table A24.2).

Around 30–40% of total patient contacts are handled solely by family physicians without referrals to other providers.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

The prescribing behaviour of family physicians is not easy to describe because citizens can obtain antibiotics from pharmacies as a self-medication. So, although 307 per 1000 inhabitants reported use of antibiotics in the past 12 months, 198 out of 1000 inhabitants provided self-medication with antibiotics in the past 12 months (DeSchepper et al., 2008).

The IDF *Diabetes atlas* 2006 estimates that the diabetes prevalence rate in Romania is 9.4% of the adult population, representing an estimated 1.5 million people. This number is forecast to rise to 10.7% by 2025 (World Diabetes Foundation, 2006). GPs take care of people with diabetes who are non-insulin-dependent and diabetologists take care of people who are insulin dependent. Annual check-ups with a diabetes specialist are required for all people with diabetes, in designated centres in each of the 42 counties in Romania. In some cases – when there is no improvement or when complications of diabetes occur – more frequent check-ups are required (FEND and International Diabetes Federation Europe, 2008).

One of the most important projects related to quality in family medicine in Romania was developed in 2001 by the National Centre for Studies in Family Medicine (NCSFM) in cooperation with Dutch experts. The project is called Qualy-Med (Marginean, 2005). During the project, around 40 family physicians were trained in the methodology of guideline development, based on the principles of evidence-based medicine, and taking account of the European recommendations (NCSFM is member of GIN – Guideline International Network). The result was the publication in 2004 of five evidence-based guidelines for family medicine on essential hypertension, type II diabetes, low back pain, prenatal care and urinary tract infection in women. The NCSFM is also member of the World Organization of Family Doctors (WONCA). In 2009 two new guidelines for good practice were launched, the guideline for depression management in family medicine and the guideline for management of patients with asthma.

Family physicians and specialists perform Pap smear (cervical cytology) tests. Of sexually active women 80% have never had a Pap smear test and 37% have never heard of it. Opportunistic screening for cervical cancer started in 2005 through the national sub-programme of the Health Ministry. The best coverage of Pap screening services can be obtained only through active intervention of family physicians (Ministry of Health, 2005).

#### 4.2 Efficiency of primary care

Primary health care is provided by the family physician chosen by the patient. At the moment, the family physician has also a filter role for the patient's problems (Predescu, 2008). Until recently the activity of family physicians was only focused on medical assistance provided in their own office for those covered by medical insurance, and less on home visits or on taking actions that could lead to the identification of public health problems. In addition, there are many situations where patients or people who cannot prove the payment of medical insurance are excluded from the family physician list, and do not have permanent medical assistance.

Resources should be better allocated and the efficiency and integration of health services in primary care should be enhanced by a diversified payment method, including payments for additional services.

#### Acknowledgements

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# 25 Slovakia

*A. Windak, M. Oleszczyk, E. Jurgova*

## 1. The context of primary care

### Country and population

Slovakia is situated in central Europe, landlocked, with a territory of 49 034 km<sup>2</sup> and a population 5.41 million in 2008 of whom 51.5% are women. The mean density of the population was 110/km<sup>2</sup>, with a natural increase in 2006 of 0.1%. Slovakia has an under-15 population of 15.8% and 12% are over 65 years of age (Národné centrum zdravotníckych informácií, 2008; Statistical Office of the Slovak Republic, 2008).

### Development and economy

Slovakia is a parliamentary republic with a one chamber Parliament (Národná Rada Slovenskej Republiky) elected in general elections for a four-year term of office. The President is also elected in general elections for a five-year term of office. Slovakia has been an EU Member State since 2004 (Národné centrum zdravotníckych informácií, 2008; Statistical Office of the Slovak Republic, 2008).

In 2008 the GDP per capita (PPP) was US\$ 22 141 – at the level of 72% of the EU average. The unemployment rate in 2010 was 13% and the Human Development Index in 2010 was 0.818 giving Slovakia 31st position in the world. The emigration rate in 2007 was 8.2%, with the main destination being western European countries (OECD, 2010; Statistical Office of the Slovak Republic, 2010; UNDP, 2010).

**Table A25.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Slovakia	EU <sup>1</sup>	Slovakia	EU <sup>1</sup>	Slovakia	EU <sup>1</sup>	Slovakia	EU <sup>1</sup>	Slovakia	EU
1995	n.a.	7.6	n.a.	1275.9	n.a.	740.9	n.a.	292.7	n.a.	27.5 <sup>6</sup>
2000	5.5	7.9	603	1608.0	780	669.0	314	295.1	18.3	28.3 <sup>5</sup>
2005	7.0	8.5	1139	2150.9	680	604.6	302	316.0	18.7	26.3 <sup>4</sup>
2009	7.7 <sup>7</sup>	8.8	1155 <sup>7</sup>	2788.2	580 <sup>7</sup>	564.8	368 <sup>7</sup>	321.6	18.2 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Slovakia	EU <sup>2</sup>	Slovakia	EU <sup>1</sup>	Slovakia	EU <sup>1</sup>	Slovakia	EU <sup>1</sup>
1995	n.a.	575.1	n.a.	12.5	n.a.	15.7	n.a.	6.6
2000	742	655.9	8.5	10.3	19.6	17.7	14.1	6.8
2005	599	682.7	7.3	9.5	19.8	16.2	9.5	6.8
2009	630.2 <sup>7</sup>	745.5	7.07	8.8	19.1 <sup>7</sup>	15.6	8.7 <sup>7</sup>	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010b); Slovakian values are based on (Národné centrum zdravotníckych informácií, 2001, 2006, 2008; OECD, 2010; WHO Regional Office for Europe, 2010a).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2007.

## Population's health

In 2008, life expectancy at birth for men was 70.9 years and for women 78.7 years. Life expectancy at the age of 60 was 16.5 and 21.1 years respectively in 2006. Main causes of death in 2007 were cardiovascular diseases (47% in males; 61% in females), neoplasms (25% in males 20% in females), external causes, diseases of the respiratory tract and digestive system diseases. Drug consumption in 2006 was 149.5 million packs (Národné centrum zdravotníckych informácií, 2008; Statistical Office of the Slovak Republic, 2008; Szalay et al., 2011).

## Characteristics of the health care system

All citizens are covered by general health insurance. There are several competing insurance companies, but the Public Health Insurance Company is predominant (Národné centrum zdravotníckych informácií, 2008; Statistical Office of the Slovak Republic, 2008).

Table A25.1 shows there is a constant tendency of increasing spending on health care, yet this is still below the EU average. The number of hospital admissions has been almost steady over the past decade, while length of stay in hospital is decreasing. The number of outpatient consultations has also decreased but still is above the EU

average. The ratio of GPs for adults is nearly constant and GPs account for about 18% of all physicians (Národné centrum zdravotníckych informácií, 2001, 2006, 2008; OECD, 2010; WHO Regional Office for Europe, 2010a).

## 2. Structure of the primary care system

### 2.1 Primary care governance

Although the idea has been widely discussed, there is no formal policy document describing the current state or vision on the future development of primary care in Slovakia. In 2010 the new government declared in a manifesto (among other things) significant changes in the health care system, including cancellation of general practice referrals to specialists. However the manifesto is considered to be more a political declaration than a real plan of action (Government of the Slovak Republic, 2010).

There is no special department at the level of the Ministry of Health or state inspection dealing with primary care issues. As a result, there is no clear governmental primary care policy, for example to regulate equal access to primary care providers or to stimulate multidisciplinary collaboration among health professionals. Primary care

does not have a specific budget that can be separated from secondary care. Organizations of stakeholders or communities do not contribute to primary care policy development.

Only vocationally trained physicians, who complete a five-year postgraduate training programme, are allowed to work in primary care. A special licence is required to provide health care in general practice (Ministry of Health, 2004d).

Many clinical guidelines have been implemented in Slovakia, most of them developed by the Slovak Society of General Practice/Family Medicine, and others by different specialist scientific associations. Patients' rights are guaranteed by law, including informed consent, protected access and confidential use of medical records, as well as procedures to process patient complaints (Ministry of Health, 2004e).

## 2.2 Economic conditions of primary care

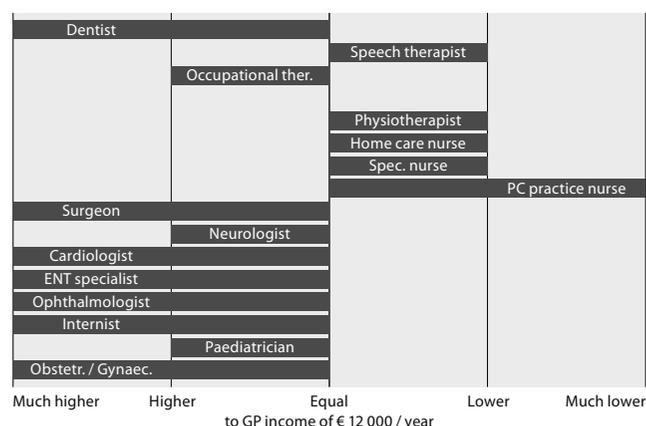
In the year 2006 over 23% of total health expenditures in Slovakia were devoted to the provision of outpatient services. This amount includes not only primary care but also outpatient specialist services. According to expert estimations expenditure on primary care was 8% of total expenditures on health. In the same year 4.5% of the health care budget was spent on public health and preventive activities (Eurostat, 2010).

All Slovaks are medically insured, including for services provided by primary care and medicines prescribed by GPs (Ministry of Health, 2004c).

Nearly all primary care physicians are self-employed and have contracts with the health insurance funds. Only about 1% of them are salaried employees, hired by other GPs or local authorities. This last group is usually paid a flat salary, while the others are remunerated on the basis of a mixed system, including a capitation fee and additional payments for home visits, vaccinations or other preventive activities. Although some published data suggest that the average annual income of a GP can exceed US\$ 28 000 (in PPP) (OECD, 2009), most of the national primary care experts agreed that, after expenses and taxation, it is closer to €12 000. Fig. A25.1 shows that medical specialists, dentists and occupational therapists generally have a (much) higher income than a mid-career GP. However GPs are better paid than

nurses and other allied health personnel such as speech therapists. For example, the average income of a GP in Slovakia is more than twice that of a hospital nurse.

**Fig. A25.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



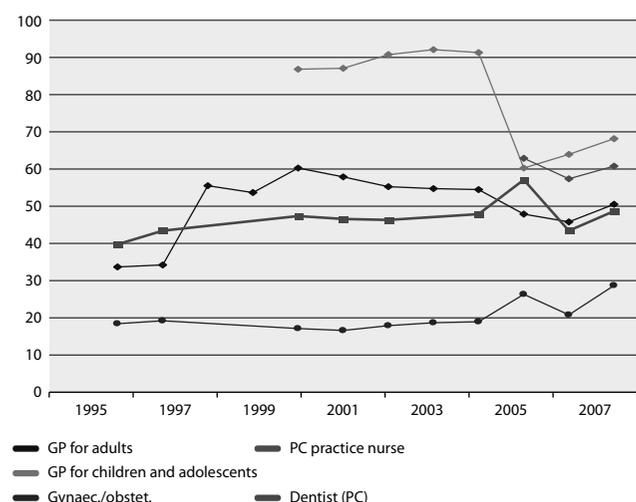
## 2.3 Primary care workforce development

Only GPs, paediatricians, gynaecologists, ophthalmologists and dentists are available without referrals (Ministry of Health, 2004a, 2004b). To see any other specialist, formal referral from a primary care physician is required. According to the database of the Slovak Medical Chamber, the 'average GP' in the country is 56 years old. Only 11% of them are younger than 35 years, 16% are between 35 and 45 years of age, 38% are between 45 and 55 and 35% are older than 55 years.

GPs are obliged to provide services 40 hours per week and their responsibilities are described in the concept document issued by the Ministry of Health (Ministry of Health, 2006).

General practice is not a very popular medical specialty in Slovakia. Their financial remuneration seems to be modest as shown by Fig. A25.1. In 2007 only 6% of medical graduates chose it as their future professional career. As a consequence, between the years 2002 and 2006 the percentage of all medical specialists who are vocationally trained in general practice has decreased by one-sixth. This development in supply of primary care professionals is illustrated by Fig. A25.2 (Eurostat, 2010; WHO Regional Office for Europe, 2010a). A similar trend was observed, for other medical specialties, while for most of the allied health professions an increase was observed. In 2007 GPs constituted 12% of all medical specialists in Slovakia (Ministry of Health, 2006; Národné centrum zdravotníckych informácií, 2008).

**Fig. A25.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Sources: Národné centrum zdravotníckych informácií 1997, 2003, 2004, 2005, 2006, 2007, 2008.

In Slovakia general practice was established as a medical specialty in 1978. The Postgraduate Medical Academy – a central institution responsible for postgraduate education in all medical specialties – runs vocational training in family medicine. None of the medical universities in the country has a department of family medicine, although the subject is taught at all schools, mainly by other specialists. Vocational training lasts five years, including one year spent in general practice (Ministry of Health, 1988). There is no special training for community or practice nurses.

GPs have their own association, dealing with both scientific and professional development of the discipline. Also an educational journal (*Slovensky Lekar*) is published bimonthly and a scientific journal (*Via Practica*) is published quarterly. Nurses have neither their own professional association nor a specialist journal dealing with family or community nursing issues.

### 3. Primary care process

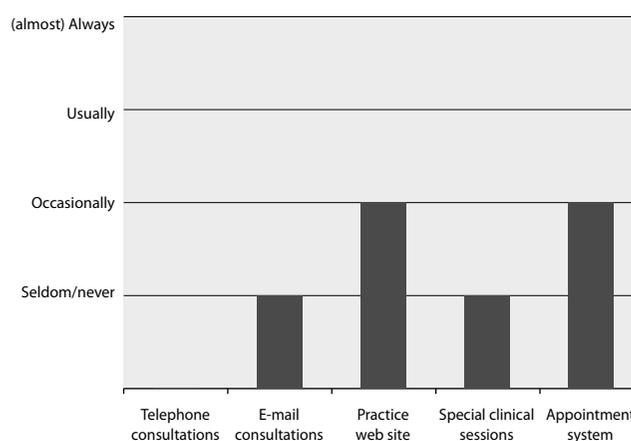
#### 3.1 Access to primary care services

In 2007 there were 50.5 GPs for adults per 100 000 adult population and 68.2 GPs for children and adolescents per 100 000 children and adolescents. The respective indicator for gynaecologists was 28.7 and for dentists, 48.6. In 2007 the geographical availability of GPs per 100 000 inhabitants slightly varied between the regions and was highest in Bratislavski kraj (54.6) and lowest in

Presovsky kraj (47.3) (Národné centrum zdravotníckych informácií, 2008). Data on rural–urban differences are not available. No major problems are reported by experts in urban or rural areas on access to general practice care or community pharmacies.

Fig. A25.3 shows the extent to which certain organizational arrangements commonly exist in primary care practices or centres. Modern communication techniques like e-mail consultations or practices with web sites are seldom or only occasionally present. Limited data show that about a quarter of GPs might have their own practice web site and only slightly more than 2% could communicate with their patients via e-mail (Dobrev et al., 2008). The use of appointment systems is not part of everyday practice, occurring only occasionally. GPs only rarely offer special sessions or clinics for certain patient groups (e.g. diabetics, pregnant women).

**Fig. A25.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Source: Dobrev et al., 2008 and expert interviews.

The number of daily hours of availability is not strictly regulated by law. After-hours care is provided mainly by walk-in centres, where face-to-face contact with a GP or nurse is available. In some limited cases special deputizing services or hospital emergency departments serve patients with health problems after office hours. Most of the services, like general practice or specialist consultation and home visits, are free of charge for patients. Co-payment is required for certain medicines prescribed by physicians. In the year 2007 only 14% of Slovaks considered their health care system not very or even not at all affordable. In the same year, 83% of patients found access to their GPs easy in general (European Commission, 2007; Projekt rozvoja kvality zdravotnej starostlivosti, 2005).

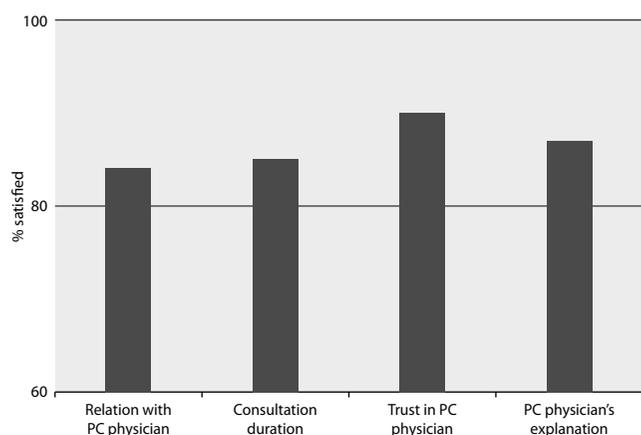
### 3.2 Continuity of primary care services

All Slovaks are on the lists of their primary care physicians. The average list size (calculation based on internal data of General Health Insurance Company) is 2163 persons. Ninety-eight per cent of patients reported consulting their usual primary care physician for their common health problems.

All GPs routinely keep clinical records from medical consultations. Computers are widely used and 90% of GPs use them for administrative purposes. Nearly the same proportion (89%) store patients' records electronically and 79% of GPs keep electronic records of prescriptions issued to their patients (Dobrev et al., 2008).

Referral letters are commonly used in general practice. Normally specialists report back to GPs about an episode of treatment provided to their patients. Information about out-of-hours contacts is also usually communicated to GPs. Patients have a free choice of GP or centre (Ministry of Health, 2004c). Fig. A25.4 shows that 84% of patients reported being satisfied with the quality of the doctor–patient relationship. Ninety per cent of patients trust their GPs and 87% are satisfied with the explanations about medical management given by them (Projekt rozvoja kvality zdravotnej starostlivosti, 2005). Even though consultations generally take 4–5 minutes, the majority of patients are satisfied with this.

**Fig. A25.4:** Patient satisfaction with aspects of care provision



Source: Projekt rozvoja kvality zdravotnej starostlivosti, 2005 and expert interview.

### 3.3 Coordination of primary care services

GPs, paediatricians, gynaecologists, ophthalmologists and dentists are directly accessible for patients in Slovakia. For other specialists a referral letter from a primary care

physician is required. Alternatively, patients are expected to cover costs of a specialist visit without referral out of pocket (Ministry of Health, 2004c). In Slovakia all GPs run solo practices, which means that they have an individual list of patients. As a rule, patients consult their own GP, who only in case of absence may occasionally be replaced by another GP. It is very uncommon for nurses to run specialist (e.g. diabetic) clinics or conduct health education activities. Also specialists normally do not visit their primary care colleagues to consult them or to provide joint care. Similarly, GPs rarely or never make a telephone call to seek direct advice from medical specialists. Data from patient records collected by GPs are very seldom or never used to identify health needs or priorities. Only incidentally are surveys, conducted on local level, used to improve the quality of care provided by GPs.

### 3.4 Comprehensiveness of primary care services

General practices are always equipped with sets of dressing or bandages and urine strips or glucose tests. Usually they also have otoscopes but ECG machines are only occasionally available, while peak flow meters and gynaecological or surgical instruments are almost never available.

Table A25.2 provides an overview of the primary care providers' involvement in the delivery of various primary care services.

General practice care in Slovakia in certain areas is limited by age, sex and type of complaints, presented by the patients (see Table A25.2) (Ministry of Health, 2008). Children are always seen by paediatricians (GP for children and adolescents), women with gynaecological or pregnancy related problems are usually served by gynaecologists. Most GPs would however see a person with psychosocial problems or even psychiatric disorders (e.g. suicidal inclinations or alcohol addiction), at least initially.

Many specialists are involved in overall medical care, however most of the GPs usually care for patients suffering from chronic diseases like congestive heart failure, peptic ulcer and mild depression, or even cancer. Patients who are in nursing homes are also usually under the care of their GPs. Conditions like chronic bronchitis would only occasionally be followed by general practice, while uncomplicated diabetes type II or rheumatoid arthritis seldom or never.

In total 72.2% of patients' consultations in primary care are handled solely by GPs without referral to other specialists.

Minor surgery (e.g. resection of ingrown toenail, wound suturing, excision of warts), gynaecological procedures (e.g. insertion of IUD) or other manual procedures (e.g. fundoscopy, removal rusty spot from the cornea or joint injection) would seldom or never be performed in primary care settings. Setting up an intravenous infusion would be done only occasionally. Most of the above procedures would be performed by surgeons, gynaecologists, ophthalmologists or orthopaedic surgeons respectively.

GPs are responsible for tetanus or high-risk groups' influenza vaccination. They also usually conduct HIV/AIDS and cholesterol screening or tests for sexually transmitted diseases. Breast cancer screening is done by GPs only occasionally, whereas allergy vaccinations and cervical cancer screening seldom or never. Family planning and routine antenatal care, or paediatric surveillance is performed by gynaecologists and paediatricians respectively. Vaccinations against childhood communicable diseases (e.g. diphtheria, pertussis, mumps or rubella) are performed exclusively by GPs for children and adolescents (district paediatricians). GPs, however, are usually involved in lifestyle counselling in the case of obesity, poor physical activity, smoking or problematic alcohol consumption. Most of these services are provided on an individual basis and group health education is rarely or never performed by GPs (Ministry of Health, 2004b, 2006).

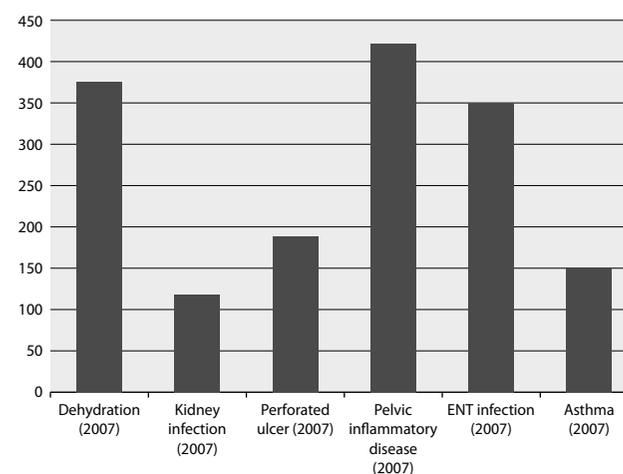
#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

In 2008 an average Slovak GP issued 418 prescriptions per 1000 patient contacts. Data from 2007 show that all ambulatory physicians prescribed 25.3 DDD of antibiotics per 1000 inhabitants per day (ESAC, 2009).

The number of hospital admissions for primary care sensitive conditions provides insight into the quality of care provided at primary care level. Fig. A25.5 shows that relatively high hospital admission rates occur in Slovakia (in 2007) for patients with a diagnosis of pelvic inflammatory disease, ENT infection and dehydration (Národné centrum zdravotníckych informácií, 2008).

**Fig. A25.5:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



Source: Národné centrum zdravotníckych informácií, 2008.

Precise data about quality of care provided to diabetic or COPD patients are not available. Fig. A25.5 shows a relatively low hospitalization rate for asthma patients.

Vaccination rates among children, performed by GPs for children and adolescents, are among the highest in the EU and are above 99% (OECD, 2009).

In 2007 21.3% of Slovak women aged 60–68 years had received a mammography (Masak & Plesko, 2007; OECD, 2009) and 20% of women 18–64 years old had received a pap smear (Masak & Plesko, 2007; OECD, 2009). Both these procedures are performed mainly outside of primary care settings.

##### 4.2 Efficiency of primary care

In 2007 GPs for adults in Slovakia provided on average 4.75 consultations per capita. The average length of general practice consultation was 4–5 minutes (Projekt rozvoja kvality zdravotnej starostlivosti, 2005).

Home visits constituted 3.4% of all patient contacts; on average a GP makes nine home visits per week.

In 2008 GPs issued 278 referrals per 1000 listed patients per year.

**Table A25.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Man aged 28 with a first convulsion</li> </ul>	<ul style="list-style-type: none"> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 18 asking for oral contraception</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Pneumonia</li> </ul>	<ul style="list-style-type: none"> <li>• Uncomplicated diabetes type II</li> <li>• Rheumatoid arthritis</li> </ul>
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Wedge resection of ingrown toenail</li> <li>• Wound suturing</li> <li>• Excision of warts</li> <li>• Insertion of IUD</li> <li>• Removal of rusty spot from the cornea</li> <li>• Fundoscopy</li> <li>• Joint injection</li> <li>• Strapping an ankle</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> </ul>	<ul style="list-style-type: none"> <li>• Allergy vaccinations</li> <li>• Cervical cancer screening</li> </ul>
Health promotion (from a list of 4 items)	–	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

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# 26 Slovenia

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## 1. The context of primary care

### Country and population

The Republic of Slovenia is a central European country and covers an area of 20 273 km<sup>2</sup>, with a population of 2.05 million (Statistical Office of the Republic of Slovenia, 2010).

Slovenia is among the countries with an older population: at the 1991 population census the share of people over 65 years exceeded 11% and by the end of 2006 this was 15.9%. By 2009 almost 320 000 people were over 65 years old. In Slovenia the ageing index as the ratio between the old population (aged 65 years or more) and the young population (aged 0–14 years) is over 100: in 2006 it was 113.7, which means that at the end of 2006 there were almost 114 people aged 65 years or more per 100 people aged less than 15 years (Statistical Office of the Republic of Slovenia, 2010).

### Development and economy

Slovenia is a parliamentary democratic republic and it is a member of the EU (since 2004) and has adopted the euro as the national currency. The Human Development Index for Slovenia is 0.929, which gives the country a rank of 29th out of 182 countries (UNDP, 2009). GDP amounted €37.13 billion in 2008 and GDP per capita in PPP was €18 400.

The number of unemployed persons and the unemployment rate has been increasing since the

**Table A26.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Slovenia	EU <sup>1</sup>	Slovenia	EU <sup>1</sup>	Slovenia	EU <sup>1</sup>	Slovenia	EU <sup>1</sup>	Slovenia	EU
1995	7.5	7.6	984	1275.9	574.1	740.9	n.a.	292.7	n.a.	27.5 <sup>6</sup>
2000	8.3	7.9	1453	1608.0	539.9	669.0	215.0	295.1	n.a.	28.3 <sup>5</sup>
2005	8.4	8.5	1978	2150.9	483.0	604.6	234.5	316.0	20.5	26.3 <sup>4</sup>
2009	8.3 <sup>7</sup>	8.8	2329 <sup>7</sup>	2788.2	470.0 <sup>7</sup>	564.8	238.0 <sup>7</sup>	321.6	20.8 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Slovenia	EU <sup>2</sup>	Slovenia	EU <sup>1</sup>	Slovenia	EU <sup>1</sup>	Slovenia	EU <sup>1</sup>
1995	n.a.	575.1	10.4	12.5	15.1	15.7	7.2	6.6
2000	685.0	655.9	8.6	10.3	16.0	17.7	6.8	6.8
2005	747.3	682.7	7.1	9.5	16.9	16.2	7.2	6.8
2009	780.8 <sup>7</sup>	745.5	6.9	8.8	17.2	15.6	6.6	6.9

Sources: EU and Slovenia average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008.

third quarter of 2008. Since 1993, when the Labour Force Survey was done for the first time, the lowest unemployment rate was 4.1% in the third quarter of 2008. Since then the unemployment rate has been increasing and at the end of 2009 it was 6.4% (Statistical Office of the Republic of Slovenia, 2010).

In Slovenia 49% of people have an upper secondary education, 15% a tertiary education and 22% of people have basic education or less (Statistical Office of the Republic of Slovenia, 2010).

#### Population's health

For a boy born in Slovenia in 2007 the life expectancy at birth was 74.8 years while for a girl it was 82.1 years. This is comparable to the figures of other EU Member States (EU25) (Albrecht et al., 2009).

Fertility in Slovenia has been on the rise since 2003. In 2009 21 817 children (11 126 boys and 10 691 girls) were born alive, which is 1994 (10%) more than a year before. Since 2003, when Slovenia registered the lowest number of live-born children, the number has been slowly growing and 10.8 children per 1000 population were born in 2009 (9.8 in 2007). Slovenia is still among the European countries with the lowest infant mortality rate

and the number of infant deaths per 1000 live births has dropped from 2.8 in 2007 to 2.4 in 2008 (Institute of Public Health of the Republic of Slovenia, 2009).

Morbidity and mortality data show that Slovenia experiences the same respective characteristics as other European countries in western and central Europe (Albrecht et al., 2009) with 39.5% of deaths caused by cardiovascular disease in 2008. Malignant neoplasms are the second leading cause of death with a 31.5% share of all deaths in the country (Institute of Public Health of the Republic of Slovenia, 2009).

#### Characteristics of the health care system

Total health spending accounted for 8.3% of GDP in Slovenia in 2008, which is lower than the average of OECD countries (8.8%) (see Table A26.1). Slovenia also ranks below the EU average in terms of total health spending per capita, spending PPP\$ 2329 in 2008 compared to an EU average of PPP\$ 2788 (WHO Regional Office for Europe, 2010). Almost three-quarters of health expenditures (in 2005 74.8%) were used for funding curative care and for medical goods. In terms of the share of total health expenditures, long-term nursing care services are next with 8% in 2005. In 2005 these expenditures, which together with social

care represent total long-term nursing care expenditure, amounted to 1.1% of GDP. In 2005 services in hospitals (including specialist outpatient examinations) and in nursing and residential care facilities represented 44.1% of total current expenditure on health, while expenditure for providers of outpatient ambulatory health care represented 25.1% (Statistical Office of the Republic of Slovenia, 2010).

In 2008, Slovenia had 2.4 practising physicians per 1000 population, which is well below the EU average of 3.2. There were 7.8 nurses per 1000 population in 2008, almost the same as the average in EU countries of 7.5. With 6.6 outpatient contacts per person per year (in 2009), Slovenia is well below the 7.8 average for countries that joined the EU in 2004 and 2007, and almost the same as the EU average of 6.9 (WHO Regional Office for Europe, 2010).

Determined by the political will, privatization in health care in Slovenia has been a gradual process. In 2008, it applies to 30% of the primary care providers (GPs, paediatricians and school medicine doctors), almost 60% of providers in dentistry and about 20% of providers of outpatient specialist care. In the hospital setting, privatization remains limited and there have not been significant private investments in health infrastructure.

Hospital services are provided at both secondary and tertiary levels (Markota et al., 1999).

## 2. Structure of the primary care system

### 2.1 Primary care governance

The latest legitimate political document on future development of health care is the Resolution on the National Health Care Plan 2008–2013 (Ministry of Health of the Republic of Slovenia, 2007), which clearly defines the coordinating role of primary (community) health centres in providing curative and preventive services as well as emergency services. The Resolution promotes the importance of GPs/family practitioners and qualified nurses in primary care. Primary health care activities are performed at a local level, predominantly in community health care centres, which offer basic medical and dental services (Markota et al., 1999). Primary health services can also be offered in smaller health centres called “health stations”. The funding of primary care is arranged mainly through a contract between the providers and

the National Health Insurance Institute. The criteria on which the contract is based are predominantly capitation and fee-for-service. Primary health care is under the jurisdiction of local communities, which are responsible for health care policy development at local level. The local communities are also the owners of the institutions at the primary care level. Privatization of primary care started in 1992 and more and more primary care physicians choose to work independently and have their own contract with the National Health Insurance Institute. The majority of professionals who have started independent work are dentists (some of them have decided on a purely out-of-pocket method of payment), followed by GPs. These GPs work exclusively on a contract with the National Health Insurance Institute. Some of them have tried to raise their income by offering “additional benefits” for their patients, which carry an extra charge (e.g. an appointment system, single personal physician, 24-hours availability, etc.). Physicians on the primary health care level are gatekeepers. Every patient has to choose their own general or family physician.

A new model for vocational training in family medicine was established in 2002, following the recommendations of the European Union of General Practitioners (UEMO). According to the new programme, which lasts four years, trainees spend half of their training in a hospital setting and half in general practice, where they are supervised by a trainer in practice (Bulc et al., 2006).

A new Act in the field of protection of patient rights, the Act on Patients’ Rights (Ministry of Health of the Republic of Slovenia, 2008) has recently been passed. It lays down the rights of a patient, as a user of health care services, regarding all providers of such services, the procedures to enforce these rights when they are violated and the obligations stemming from these rights. The purpose of the Act is to enable equal, adequate, solid and safe health care of a required standard that is based on trust and respect between the patient and the doctor or any other medical professional or medical collaborator. Apart from the Act on Patients’ Rights, the Health Services Act (Ministry of Health of the Republic of Slovenia, 1992) also provides a legal basis in the field of patients’ rights. The Health Services Act lays down the measures and activities that shall be carried out by the medical professionals in safeguarding health, prevention of illness, diagnosing and treating patients and the injured. The Act lays down the nature and the course of medical treatment, the public health care service and

the links between health care organizations and medical professionals in chambers and associations (Ministry of Health of the Republic of Slovenia, 1992).

## 2.2 Economic conditions of primary care

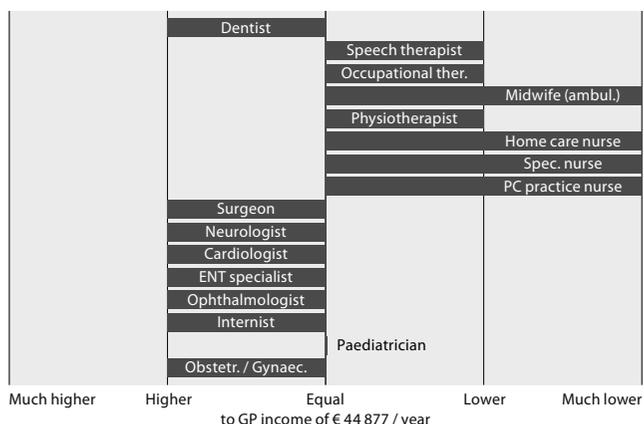
The annual nominal growth of total health expenditure in the period 2003 to 2007 (the average was 5.6%) has lagged behind GDP growth. In 2006, Slovenia spent €2564 million on health care and in 2007 €2702 million, or 5.4% more than a year before. More than three-quarters of current expenditures on health (in 2007, 77.9%) were used for funding curative care and for medical goods (Statistical Office of the Republic of Slovenia, 2010) while 12.23% of total expenditure on health was spent in the primary care sector.

All of the population is covered or insured for costs of general practice services (office and at home). Seventy-two per cent of GPs are salaried with national, regional or local authorities and 28% are self-employed with contracts with health insurance fund(s) or health authorities. Their salary is related to the number of the patients on their list plus delivering the plan/programme of health care services specified in the contract with the National Health Insurance Company (92% of total income). Additionally, 4% is related to the provision of preventive services. Gross annual income of a “mid-career” GP is €44 877 per year and of a medical technician or nurse €16 169 per year, while €5088 is allocated to administrative support staff. For the total general practice (team, amortization of equipment, costs for laboratory, material costs) the annual income is €115 000 per year, although it can be increased, based on the number of patients on the list of the doctor. The team income covers all expenses for the work of one doctor and 1.1 nurse (or health technician) and for administration, material and amortization. Fig. A26.1 shows that the income of an average GP is lower than the income of medical specialists and dentists, but higher than the income of nurses, and paramedical professionals.

Out of the total costs for medicine, 15% is co-paid by patients, unless there is a full coverage under Article 23 of the Law of the Health System and Health Insurance. Health states defined in paragraph 1 of Article 23 of the Law on Health Care and Health Insurance allow full coverage of medicines for the treatment of most important contagious diseases, including AIDS and

STDs, and for diabetes mellitus, major psychiatric diseases, epilepsy, muscular dystrophy, multiple sclerosis and psoriasis (Fürst, 2006).

**Fig. A26.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



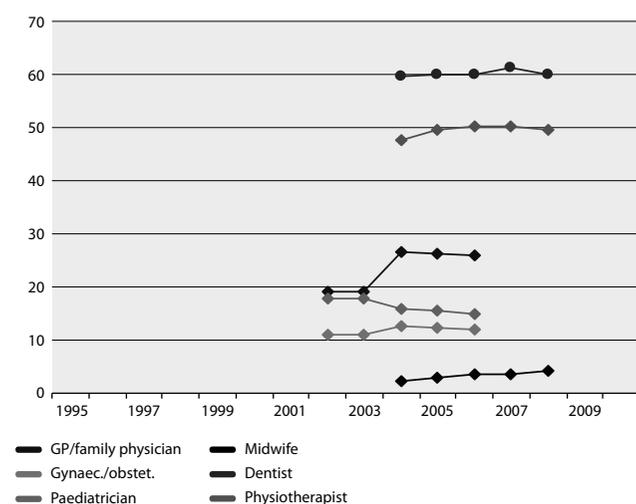
## 2.3 Primary care workforce development

There were 0.46 GPs per 1000 population in 2006, quite a low number compared to other primary care physicians, and the situation in other European countries (see Fig. A26.2) (Institute of Public Health of the Republic of Slovenia, 2009). Foreign medical professionals constitute <1% of the workforce. The number of nurses working in teams with GPs was 1045 (full-time equivalents) in 2006. There were 25 nurses with a university diploma and 985 nurses with secondary level education (four years of nursing school). Advanced roles for nurses in primary care do not exist. District nurses carry out tasks for people at home, especially for elderly and disabled patients. Other medical primary care professionals mainly include stomatologists (no referral required), pharmacists, physiotherapists and midwives. Primary care paediatricians and specialists in school medicine are also part of primary care. Specialists for whom referral is not required include gynaecologists and psychiatrists.

Every patient has to choose his/her own “personal” family physician, if he/she wants to enter the health care system. The personal family physician has the responsibility to provide primary care for the patients on the list, including emergency care 24 hours a day. Also emergency medical services are provided by the family physicians as part of their daily routine, as part of out-of-hours services or as separate services. Family physicians’ gatekeeping role means that they are part of the cost containment and quality assurance efforts of the health care system.

There is a Family Medicine Department at the Medical School in Ljubljana University and another at the University of Maribor, which started a Medical School in 2003. The Slovene Family Medicine Society is a non-profit-making organization of family physicians. Its objectives are to foster development in family medicine in Slovenia and to coordinate vocational training in family medicine, serving family physicians as a base for continuing medical education, as a forum for exchange of ideas and as a centre for research and quality improvement activities (Slovene Family Medicine Society, 2011).

**Fig. A26.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Source: Eurostat, 2011.

### 3. Primary care process

#### 3.1 Access to primary care services

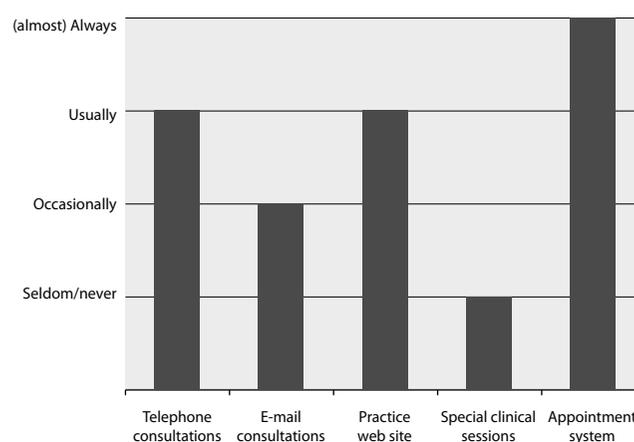
The Medical Chamber of Slovenia has been discussing the problem of the lack of doctors since 1995 because, in the next decade, 540 of family physicians will retire (out of a total of 904 in 2006). In some regions the average age of a family physician is 50. Thus 50 additional family doctors per year are required, or 500 in a next decade (Matos, 2000).

Both public and private providers of care deliver primary health care. Among public providers there are health care centres and health stations. The locations of health care centres correspond to the seats of former local communities (from prior to 1995) and the locations of health stations correspond to important local centres

(that is, small towns, hamlets or villages). Primary health centres have passed through a transition period over the past 10 years as several circumstances challenged their existence. The social and political environment posed several demands, such as the introduction of competition and other market elements to health care as well as a need for more efficiency (Albrecht, Delnoij & Klazinga, 2006). The centres use appointment systems, and usually offer telephone consultations (see Fig A26.3). E-mail consultations occasionally occur, although centres do usually have a practice web site.

Based on a study of patient satisfaction, 72.9% of the respondents were satisfied with the current organization of health care services, 95.5% of the respondents were satisfied with the possibility of choosing their own family physician and 58% of participants were very satisfied with the level of care received from their personal family practitioners. It was shown that higher patient satisfaction with the family physician was the most powerful predictor of patients' satisfaction with the health care system. The results show that health care reform in Slovenia has a positive impact on consumers' perceptions of health care quality, measured in terms of consumer satisfaction with the health care system, the possibility of choosing a family physician and the overall satisfaction with the family physician (Kersnik, 2001).

**Fig. A26.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



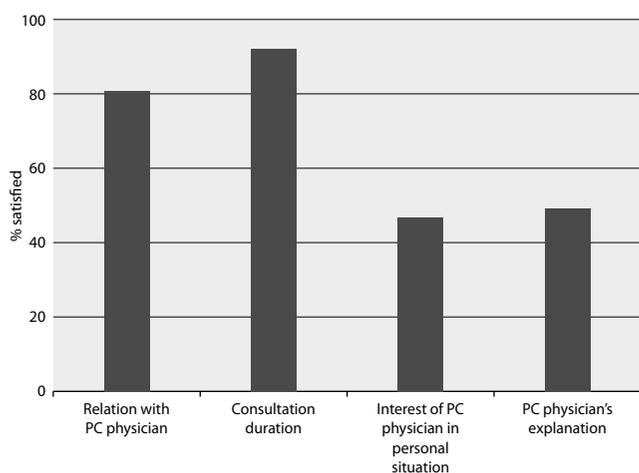
#### 3.2 Continuity of primary care services

GPs have a fully implemented patient list system. All patients are registered on the list of a "personal" GP who refers them to secondary health care services, if necessary. There are 1789 patients on the average GP list (minimum: 862; maximum 3186 patients, year 2004) (Švab et al.,

2005). There is a strong stability of patient–provider relationship, as 93.2% of patients reported that they visited their usual GP in the year 2004 (Švab et al., 2005). Almost all GPs keep clinical records of their patients: 38% of GPs report that they electronically store patient information regarding medications, and 78% of GPs report regular use of electronic networks to electronically record and store patient diagnosis data (in 2007) (Dobrev et al., 2008; Kolšek, 2009). GPs almost always use referral letters to communicate with specialists on secondary level. Referrals by the personal physician to specialists can include consultation and/or diagnostic procedures and/or treatment. When treatment is included in the referral, the specialist must provide the patient with all services that are needed, including the relevant prescriptions and follow-up visits, and specialists usually communicate back to referring GPs after an episode of treatment.

A study from 2000 (Kersnik, 2000) found that 58.2% of respondents rated the level of care received in general practice as excellent and that waiting in the waiting room was the item rated lowest (26%). Participants were satisfied with perceived time during the consultation (excellent 51.6%, good 40%; see Fig. A26.4), while personal aspects of care were moderately rated: the feeling that family practitioners showed interest in their personal situation (46.5%); the feeling that family practitioners made it easy to explain problems (49.1%). On the other hand patients praised many other aspects of family practice care in Slovenia: confidentiality of medical records (77.0%); the listening capacity of their family physicians (69.4%); and being able to speak to the family practitioner on the telephone (72%). The results also showed areas in which quality improvement is required: organizational changes to shorten the waiting time in the waiting room and greater emphasis on communication skills (Kersnik, 2000).

**Fig. A26.4:** Patient satisfaction with aspects of care provision



### 3.3 Coordination of primary care services

Teamwork should be one of the hallmarks of the Slovenian health care system, which is predominantly organized in health centres. These institutions are where all the primary care services should be organized. In practice, there are many problems and the coordination of care is less than perfect. Horizontal cooperation between different services is better in smaller health centres.

The role of the GP as a gatekeeping system has been in place for decades. On the other hand there are many paediatricians, specialists of school medicine and gynaecologists who work at a secondary or tertiary level. In this case a referral is needed. Female patients have a direct access to primary care gynaecologist. The role of the specialized nurse (e.g. in diabetes care) is not well developed and established, although some work in so-called “health education centres” at the primary care level, some work in polyclinics and some in hospitals.

Most general practices are group practices in health centres (see Fig. A26.5) and it is common for GPs to have regular face-to-face meetings (at least once per month) with the district nurse. The frequency of face-to-face meetings is based on the individual decision of the GP.

Meetings with community pharmacists are very rarely organized. Social workers state that meetings with doctors are not in a domain of their work description and communication with social services is inadequate, although sometimes GPs make phone calls to a social worker and sometimes GPs send a letter with the description of a social problem to the Centre for Social care at the municipality.

Cooperation with secondary care and other services is very traditional. Joint consultations or replaced specialist care occur very rarely, although GPs sometimes take phone advice from specialists.

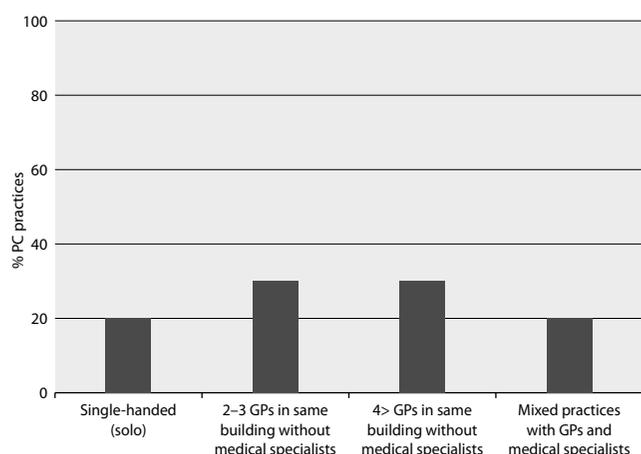
Information from patient records in general practice is used at a local level and national level to inform health care providers and policy makers.

**Table A26.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Woman aged 35 with psychosocial problems</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man aged 28 with a first convulsion</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Mild depression</li> <li>• Peptic ulcer</li> <li>• Pneumonia</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	–	<ul style="list-style-type: none"> <li>• Fundoscopy</li> <li>• Excision of warts</li> <li>• Removal of rusty spot from the cornea</li> <li>• Wound suturing</li> <li>• Insertion of IUD</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> </ul>	<ul style="list-style-type: none"> <li>• Testing for sexually transmitted diseases</li> <li>• Screening for HIV/AIDS</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

**Fig. A26.5:** Shared practice

### 3.3 Comprehensiveness of primary care services

It is estimated that GPs handle around 80% of total patient contacts without referrals to other providers. The

results of fieldwork in 2010 and 2011 show that GPs refer 4–6% on their own request. Up to 40% of all referrals are a consequence of specialists' decision that check-up is needed. They offer a large range of services, including diagnosis and follow-up for chronic conditions, although it seems they are less inclined to undertake technical tasks, such as gynaecological examination or minor surgery (see Table A26.2). The proportion of referred patients has been increasing over the years, mainly due to the heavy workload of GPs.

GPs are usually involved in screening cardiovascular risk factors and colorectal cancer. They are not very frequently involved in screening for particular diseases, such as sexually transmitted infections or cervical cancer. They perform vaccinations against tetanus and flu, but paediatricians perform most of the vaccinations in childhood.

As far as health education and promotion is concerned, this is mostly done at the single-patient level and partly at group level, organized by teachers of health education in health centres. There are many workshops organized for patients who want to stop smoking, lose weight or improve their physical condition.

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

Very little data is available about the quality of primary care in Slovenia.

Slovenian GPs are known to have a tendency to be heavy prescribers: the average number of prescriptions annually is 1904 prescriptions per 1000 contacts (year 2008) (Kersnik, 2000). There are 115.9 prescriptions of antibiotics per 1000 contacts (year 2008).

The childhood vaccination coverage is high but could be improved: 97.4% for diphtheria, tetanus and pertussis, 95.9% for measles, mumps and rubella, and 97.3% for hepatitis B (Institute of Public Health of the Republic of Slovenia, 2009).

##### 4.2 Efficiency of primary care

In a study by Švab et al. (2005), average consultation length at general practice was 7 minutes (year 2003/2004). The mean consultation time for visits with a single health problem is 6.9 minutes with an increase of about 2 minutes for each additional health problem. The mean number of health problems at a single attendance was 1.6 (range from 1 to 8) (Deveugele et al., 2002). GPs perform on average nine telephone consultations per day (Dobrev et al., 2008) although this is not an alternative to visiting doctor's office. Only an opinion, and not a patient diagnosis should be provided by phone and the patient should visit his/her doctor to get an official diagnosis. There is a problem of identification of the individual patient by phone and a problem of confidentiality of someone's personal data. The disclosure of test results by phone is a delicate issue. Some doctors provide test results by phone, some do not. In most cases the test results are provided personally or by regular post. But doctors are willing to give repeat prescriptions by telephone to patients who are chronically ill.

About 20.2% of all general practice contacts end with referral to a specialist (17% were urgent referrals and 83% non-urgent referrals in 2004). Of these, 46% of referral letters are used because the GP decides that referral is needed, 32% referral letters are used because a clinical specialist sent a request to the GP that a patient should have a follow-up at a secondary or tertiary level (Švab et al., 2005).

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# 27 Spain

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## 1. The context of primary care

### Country and population

Spain is an EU country in the south-west of Europe. Politically it is a democracy organized in the form of a parliamentary government under a constitutional monarchy. It is divided into 17 autonomous communities (ACs), each of which has wide legislative and executive autonomy, their own Parliament and government. Spain has 45.99 million inhabitants (Eurostat, 2010) in a territory of 504 750 km<sup>2</sup>, and the density of the population varies among the 17 autonomous communities, ranging from 26.19 inhabitants/km<sup>2</sup> in Castile–La Mancha AC to 803.49 inhabitants/km<sup>2</sup> in Madrid AC (INE, 2010b). The 2009 population growth was 0.07% and the total fertility rate is 1.4 children per woman. Currently, 23.3% of Spanish people are aged under 16 years and 24.61% are over 65 years (INE, 2010b). As in other countries in western Europe and because of the “baby-boom” after the Second World War, it is estimated that more than one-third of the Spanish population will be over 60 in the year 2050.

### Development and economy

Spain has undergone a profound transformation of the state over the last three decades, and the main characteristic of this change has been the wide political decentralization of the state structures. At a central level, legislative power is placed in a two-chamber Parliament (Congress and Senate). At a territorial level, each AC has

**Table A27.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Spain	EU <sup>1</sup>	Spain	EU <sup>1</sup>	Spain	EU <sup>1</sup>	Spain	EU <sup>1</sup>	Spain	EU
1995	7.4	7.6	1190	1275.9	394.4	740.9	268.8	292.7	n.a.	27.5 <sup>6</sup>
2000	7.2	7.9	1538	1608.0	368.6	669.0	330.8	295.1	n.a.	28.3 <sup>5</sup>
2005	8.3	8.5	2268	2150.9	336.1	604.6	376.7	316.0	19.1	26.3 <sup>4</sup>
2009	9.0 <sup>7</sup>	8.8	2902 <sup>7</sup>	2788.2	322.3 <sup>7</sup>	564.8	354.0	321.6	20.9 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Spain	EU <sup>2</sup>	Spain	EU <sup>1</sup>	Spain	EU <sup>1</sup>	Spain	EU <sup>1</sup>
1995	297.6	575.1	10.5	12.5	10.7	15.7	7.8	6.6
2000	357.5	655.9	9.0	10.3	11.8	17.7	8.7 <sup>9</sup>	6.8
2005	418.5	682.7	8.5	9.5	11.6	16.2	9.5 <sup>8</sup>	6.8
2009	492.7	745.5	8.1 <sup>7</sup>	8.8	11.4 <sup>7</sup>	15.6	n.a.	6.9

Sources: EU and Spain average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008. <sup>8</sup> Year: 2003. <sup>9</sup> Year: 2001.

a Statute of Autonomy with its elected Parliament and government. Most AC laws have the same legal status of those of the state.

Spain joined the EU in 1986 and experienced rapid economic growth during the following 20 years, with annual increments of more than 3% of its GDP (Eurostat, 2009). However, this has slowed down and in the last two years there has been a negative growth. This has resulted in a dramatic unemployment rate, which moved from 9.3% in 2008 to 19.9% in mid 2010 (UNDP, 2009; INE, 2010a). The GDP per capita was US\$ 32 030 PPP in 2009, and estimates for 2010 fix the GDP per capita at US\$ 29 900 PPP. Spain ranked 20th on the Human Development Index with 0.863 (UNDP, 2010). Immigration has become a new phenomenon in Spain, and from 2000 to mid 2010, 4.9 million people have moved to Spain. Currently, the immigrant population makes up 12.2% of the total population. Regarding education, 68.1% of the population completed secondary level education, and 2.1% of the population are considered illiterate (eLiceo, 2010).

#### Health of the population

Life expectancy at birth in Spain is 84.27 years for women and 78.06 years for men. The healthy life

expectancy is 63.2 in females and 63.7 in males, among the highest in the world (Eurostat, 2009). Infant mortality was 4.21 deaths for 1000 live births in 2009 (WHO Regional Office for Europe, 2010). Fertility rate is 1.47 children born per woman. Regarding the top causes of death, ischaemic heart disease is the main one (13%), followed by cerebrovascular diseases (10%); other main causes of death are trachea, bronchus and lung cancer (5%) and chronic obstructive pulmonary disease (5%) (WHO, 2009).

#### Characteristics of the health care system

The Spanish health care system underwent a major transformation along with the political reorganization of the state with the formation of ACs. It moved from a charity-based system with some aspects of the Bismarck model to a National Health System (NHS). The 1986 General Health Act defines the Spanish NHS, and its principles:

- universal coverage with free access to health care for the entire population;
- public financing, mainly through general taxation;
- integration of different health service networks under the NHS structure;

- political devolution to the ACs;
- a new model of primary health care, emphasizing integration of promotion, prevention and rehabilitation activities; and
- a gatekeeping system at the primary health care level (BOE, 1986: Article 15.1).

The devolution process in the health sector occurred in different stages. The responsibility for managing its own health system was transferred to Catalonia in 1981, Andalusia in 1984, followed by the Basque Country in 1987. In addition to the ACs mentioned, until 2001 the central government had only devolved responsibility for the health care network to the Canary Islands, Galicia, Navarra and Valencia, which together cover approximately two-thirds of the Spanish population. A central institution, INSALUD, effectively managed most health care services in the other 10 ACs. The transfer of the main social security health care network took a considerable time and was only completed in 2002. Each AC has created a health service department to manage health services, under a regional government department or health authority. The main responsibilities at the AC level are planning, financing and provision of the health services, and public health. This has allowed the development of various models within the Spanish NHS (BOE, 2006). According to this design, the central government has the responsibility to promote coordination and cooperation in the health sector, as well as to ensure that the quality of all services is guaranteed and equity exists in relation to access to health care throughout the national territory. The government also reserves for itself certain competences regarding foreign health, international relations, pharmaceutical policies, research and high-level inspection (BOE, 1986). Table A27.1 shows some general indicators of the Spanish health care system. Spain's health expenditures in total and per capita are above the EU average.

## 2. Structure of the primary care system

### 2.1 Primary care governance

Primary care in Spain has been played a significant role for more than five decades. Gatekeeping at the primary care level has been in place since the 1970s and was explicitly recognized in the General Health Act 1986. As a result of this Act, it was determined that the Spanish health system would be based on an NHS model. This

also defined the primary care core activities and the geographical organization of primary care (BOE, 1986). Prior to this, the establishment of the specialty of family community medicine in 1979 was another element which facilitated the implementation of the primary health care reform. The starting point of this reform took place in 1984, after several ACs had their health services transferred and were able to develop new legislation in order to reorganize the health services around primary care (DOGC, 1985). This allowed the ACs to create their own legislation, resulting in a diversity of management and provision models of primary care in Spain (Navarro & Martín-Zurro, 2009). However, the main pillars of primary care in Spain defined in the General Health Act, such as gatekeeping, free access and multidisciplinary teams, had to be guaranteed in all the ACs. In the 2000s, a consultation process among the main actors in primary care was set up by the Ministry of Health of the central government, and a document regarding strategies for primary care in the twenty-first century was formulated (Ministry of Health and Social Policies, 2009). Currently, as a result of the recommendations of the Ministry of Health, various ACs have set up their own initiatives and have developed different strategies (PIAPC, 2010).

On the basis of equal access to primary health care, the General Health Act fixes the minimum distribution of health areas within the Spanish territory (BOE, 1986) and the ACs can adapt the number of health care infrastructures and ratios of professionals within the primary health centres to their territory, taking into account that these professionals are required to work in geographically based multidisciplinary teams. Quality standards for facilities and health care infrastructures are established at the AC level. Health care providers are contracted and monitored by the AC health services where they operate, however they can develop their own mechanisms in order to accomplish their objectives. Furthermore, these contracts, the length of time they are valid and the operational requirements follow different mechanisms and formulas in each AC. Quality indicators implemented in various ACs are mainly a mix of performance, accessibility and cost–efficiency indicators (Gené, 2009). Each health care provider is able to develop their clinical guidelines, protocols and mechanisms of continuing medical education (CME). Moreover, scientific societies and professional associations of primary care are the main actors contributing to both CME and the development of clinical guidelines. Health professional curricula and degree recognition, both for undergraduate and postgraduate education, are defined

by the Ministry of Education at state level. However, recruitment of professionals is a responsibility of the ACs and health care providers. In order to be able to practise, each health professional is required to be licensed by a professional body, such as medical colleges or nursing colleges among others, which are decentralized to the AC level or to a province within an AC.

Citizen and community participation in the decision-making process is regulated by the General Health Act (BOE, 1986: Article 5.1) and implemented through health councils where the voice of the citizen can be heard. On the basis of the principle of democratic governance, various ACs have taken this further; citizen participation in the health councils is now legally recognized and their competences, functions and responsibilities are defined by a decree (DOGC, 2006: Article 4.3). One of the aims of these councils is the monitoring of the social impact and health outcomes of the public policy implemented in the community. Patients' rights are safeguarded in areas such as informed consent, patient access and confidential use of medical files, and patient complaints, which are fully regulated and implemented throughout the whole country. Furthermore, specific primary care patient satisfaction surveys are regularly carried out and included in the evaluation and payment schemes for providers (Direcció General de Planificació i Avaluació, 2005; DOGC, 2004).

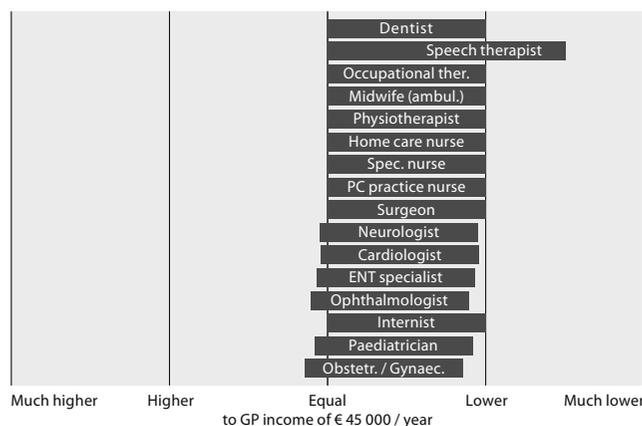
## 2.2 Economic conditions of primary care

Primary care expenditure in relation to overall health care expenditure was 14.09% in 2005 (OECD, 2005). However, 2009 OECD Health Data show that the overall expenditure on outpatient care as a percentage of health expenditure was 29.7% in the year 2007 (OECD, 2009). The two figures can be explained by the fact that in the outpatient data in the year 2007, hospital outpatient care was also included. The evolution of primary care expenditure has increased in the last 15 years in absolute terms. Nevertheless, the total percentage of primary care expenditure as part of the global GDP of the country varied from 0.91% to 0.85% of GDP between 1992 and 2005. This can be explained by real increments of 10% in the expenditure in hospital and specialized care, broadening the gap between hospital and primary care budgets. Disaggregated figures between ACs show the variability of the expenditure in primary care as a percentage of GDP ranging from 1.47% to 0.66%. Preventive care and health promotion account for 2.2% of all expenditure on health (Espasa, 2009).

Health care coverage, including primary care, is universal in Spain. All Spanish citizens and residents in Spain have free access to the public health system (BOE, 1986). There is a comprehensive free public health basket in primary health care with the exception of 40% co-payment for outpatient pharmaceutical products for all the population under 65 years old; nevertheless some drugs for specific health conditions have a minimum tariff.

Most primary health care professionals and personnel in Spain have civil servant status. There are a few exceptions regarding some ACs, in which less than 30% of professionals have contracting conditions other than that of civil servants. So, in general, the workforce at primary health care level is mainly salaried, with a wide range of supplements, from a variable salary (which takes into account geographical dispersion of the population, teaching and transportation) to various degrees of economic incentives introduced since 2003, such as professional career, achievement of quality indicators related to performance and cost-effectiveness among others (BOE, 2003). Some ACs have extended these incentives to all the personnel working in a primary health care team, from doctors to receptionists so as to reinforce the team work and to strengthen the multidisciplinary approach. Moreover, the average wages of medical professionals either in primary and hospital care are very similar. The same occurs with nurses and other health care professionals and personnel. The mean net income before taxes of a primary care physician ranges from €39 000 to €60 000 depending on the AC and variables mentioned (Magallón, 2009).

**Fig. A27.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

The primary health care workforce in Spain is organized around a multidisciplinary team, with a gatekeeping function which provides the following services: prevention and promotion of health, acute and chronic care, home care and community care activities. The core of the team is made up of physicians who are family and community medicine specialists, paediatricians, nurses, auxiliary nurses, social workers, dentists and administrative staff. The team works closely with midwives, gynaecologists, public health professionals, pharmacists, radiologists, physiotherapists and laboratories. The coordination with other health professionals and health care levels is good and is currently strengthened with the support of information technologies (IT) and also thanks to the widespread implementation of the electronic clinical records in more than 97% of the practices (Borkan et al., 2010).

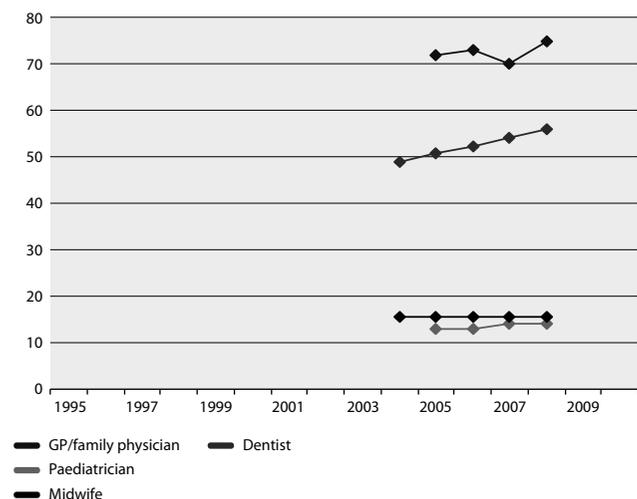
The main characteristic of primary care in Spain is the role that it plays in the health system, as specialist care cannot be accessed without a previous referral by the GP (BOE, 1986). The number of referrals is relatively low, as less than 6% of the encounters at primary care are referred to another level of care (Peiró, 2008). This is influenced, first, by the non-existence of barriers for family doctors to order laboratory and imaging tests in most ACs, and, second, by the qualification and training of these professionals (Violan et al., 2009). All medical professionals undergo a postgraduate specialist training of four years and nurses also have a university degree. In addition, continuing medical education is allocated within working hours and the establishment of a professional career for medical professionals has encouraged research in primary care. There is no division in the roles of practice nurses and district nurses in primary care in Spain, as the nurses working in primary care centres are responsible for home care as well. Currently, the role of the nurses is expanding and they play a key role in promotion, prevention and follow-up of chronic diseases, as well as involvement in community care and home care. In some ACs, nurses are authorized to prescribe a selected number of pharmaceutical products, which gives them a large degree of autonomy in the decision-making process and the care of patients (COIB, 2007). This is complemented by the support of social workers. The teams also include dentists, who are involved in prevention and promotion of oral health both in the primary care centre and in community activities.

In 2009, 38.1% of all medical professionals in Spain were family doctors, equating to 85 per 100 000 inhabitants, of whom 60.5% were over 50 years old and two out of three family doctors under the age of 39 were women (Barber & González, 2009). Fig. A27.1 shows general development in supply of some of the primary care providers. The workload of all the health professionals in primary care is 40 hours a week, excluding on-call hours carried out by family doctors and nurses in rural areas.

Unlike many European countries, university departments in family medicine do not exist in Spain. The specialization period is carried out in family and community medicine teaching units, which are responsible for coordinating the postgraduate and specialization four-year programme of the specialty in family and community medicine. These teaching units are recognized by the National Medical Specialty Commission and the Ministry of Education (Violan et al., 2009). In 2005, the specialty in family and community medicine for nurses was approved, and currently the curriculum is under development (Violan et al., 2009).

Various family medicine associations and scientific societies exist in Spain for both doctors and nurses (semFYC, SEMERGEN, SEMG, AIFICC, among others). They are based on voluntary enrolment and the core activity of these societies is research and continuing medical education. Continuous professional development and continuing medical education are shared by various institutions. Registration and licensing is mandatory in order to be able to practise and are carried out by general professional bodies, called official colleges, for each profession, such as medical doctors, nurses, social workers, odontologists, physiotherapists and so on. These official colleges have province or AC authority.

**Fig. A27.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Sources: OECD, 2010; Eurostat, 2010.

### 3. Primary care process

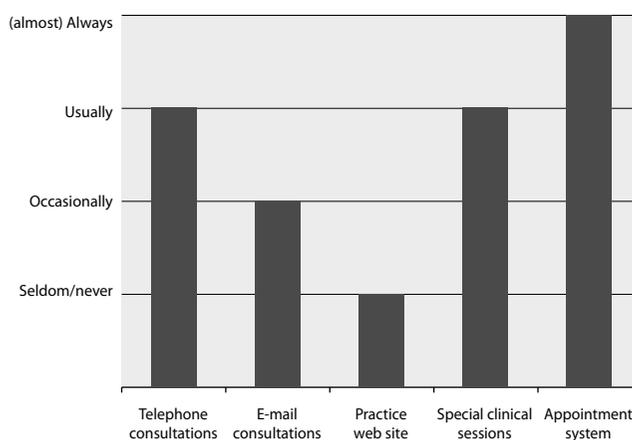
#### 3.1 Access to primary care services

Access to primary care is guaranteed by law (BOE, 1986). Distribution of primary health centres and primary care professionals around the Spanish territory has been evenly implemented over the last three decades. Each AC has developed specific regulations for the distribution of primary care professionals and to guarantee the accessibility of primary care. Ratios of professionals in relation to the number of inhabitants and distribution in the territory have been defined (DOGC, 1985, 1990). In order to allocate resources, various mapping processes were carried out in each AC, in which the analysis of the existing situation and predictive models were used (see, for example, the Department of Health, 2008). This has resulted in an equitable distribution of facilities and personnel, which takes into account rural areas, socioeconomic and demographic conditions, and also the epidemiological status of the population. From the point of view of the distribution of professionals in the territory, recruitment has not been a problem, as this is based on a civil servant formula, according to a scoring process, in which professionals have no direct choice and are obliged to work in relation to their ranking. Because of this, no areas are left uncovered. Nevertheless, in the last five years, and due to a radical demographic change in Spain due to immigration, a need for more professionals has emerged. This has changed the ratio of Spanish

and foreign doctors, and currently the majority of new licensed doctors in Spain are from Latin-American countries (Barber & González, 2007).

The average number of GPs available is 85 per 100 000 inhabitants, and evenly spread over the territory. This figure also includes paediatricians working in primary care. Similar data can be found regarding the number of nurses, as ratios of nurses and GPs per inhabitant are the same. Working hours are legislated at AC level. Opening hours vary depending on whether the primary health centres are in rural or urban areas. In rural areas they are open 24 hours, 365 days a year. In urban areas not all centres are open 24 hours, but there is always a primary health care centre on duty within a 30-minute radius. The most frequent working schedule is from 08.00 to 20.00 hours. Other after-hour provision systems exist, such as call-centre triage units, which coordinate and activate the most appropriate health care service for each consultation. It is always possible to contact health professionals. Appointments and consultations at one's usual primary health centre can be made by telephone call, internet or directly at the primary health care centre (see Fig. A27.3). Group sessions and community activities are also carried out by the health centre. Patients have the choice of being seen by any of the health professionals in the primary care teams where they are listed, including the social worker. If a patient believes he or she has to be seen on the same day, this is also guaranteed and there are no waiting lists for these requests. In the case of an emergency, all patients are able to go to any primary health centre. There are no economic barriers to access primary health care in Spain, and no fees are charged to the patients (BOE, 1986). According to a national survey on accessibility carried out in 2007, 97% of the population found their GP easy to reach (IIS, 2009).

**Fig. A27.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



**Table A27.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problems</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Uncomplicated diabetes type II</li> <li>• Mild depression</li> <li>• Patients admitted to a nursing home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Wound suturing</li> <li>• Strapping an ankle</li> </ul>	• Fundoscopy
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> </ul>	–
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of problematic alcohol consumption</li> </ul>	–

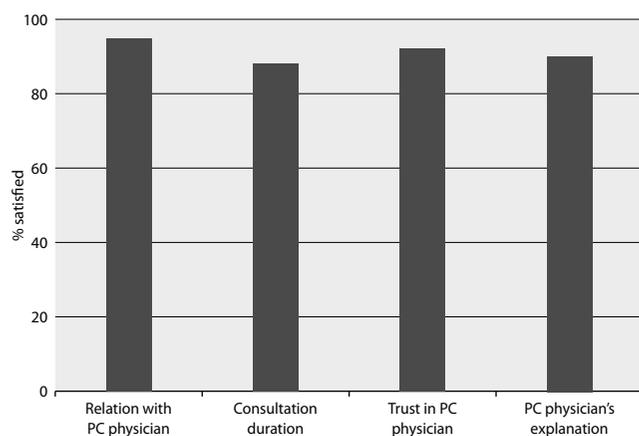
Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

### 3.2 Continuity of primary care services

Patient lists for GPs and nurses exist in all ACs. Patients can choose both GPs and nurses independently. It is also possible to choose a GP or nurse from a centre outside the patient's catchment area. In some ACs patients can choose any GP working within the AC (Catalan Health Service, 2006). In order to assure continuity of care, patients are seen by the same GP and nurse in most of the encounters (Gené, 2006). There is a single clinical record for each patient at the primary care level, and currently 97% of all clinical records are electronic (Borkan et al., 2010). The average time of a general practice consultation is 13.4 minutes (in Catalonia in 2009), and 30 minutes for those performed by nurses. GPs and nurses work as a team and the care of patients is shared. Most of the prevention and health promotion activities, home care and follow-up of chronic diseases are carried out by nurses, who arrange the patients' health care plans together with the GP. Fig. A27.4 shows that patients are generally very satisfied with different aspects of their care provided by GPs (Direcció General de Planificació i Avaluació, 2005).

Electronic clinical records for all the primary health teams have already been implemented throughout the country. This allows the sharing of patient information not only among the team but also among the out-of-hours services and other health providers. Safety and confidentiality instruments have been developed. In addition, in a few ACs, selected information from the electronic clinical record, digital images and prescriptions are shared among different health care levels and providers (TicSalut, 2010). Referrals and counter-referrals are always done either by printed letter or electronically. Laboratory tests and image tests are always reported, and in some ACs GPs have access to digitalized images done in hospitals and laboratory results are downloaded into the electronic clinical record. Continuity of care in a few ACs is extended to pharmacies and electronic prescription is fully implemented in some of them (TicSalut, 2010).

**Fig. A27.4:** Patient satisfaction with aspects of care provision

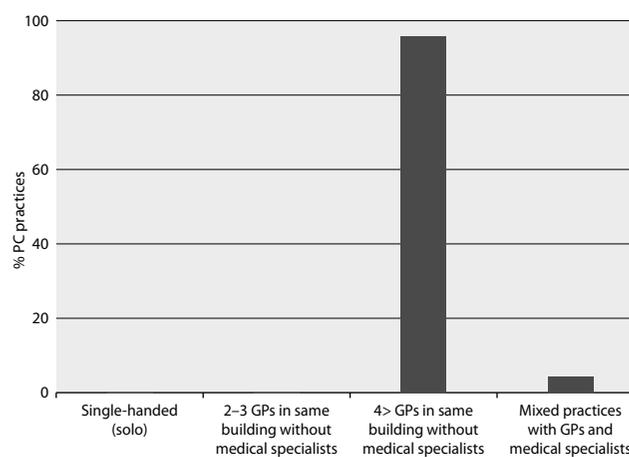
### 3.3 Coordination of primary care services

The gatekeeping system in Spain has been in place since the mid 1970s, but it was the health system reform in Spain in 1986 which contributed to the development of a strong primary care health system. The efficiency of primary care is shown by the reduction of referrals, as primary care retains 94% of the encounters. However, access to secondary care is possible in case of emergencies, as citizens can go directly to hospital Accident and Emergency departments (A&E) without a GP's referral.

Multidisciplinary teams in primary care were one of the innovative formulas introduced in early 1980s in the primary care reform in Spain (BOE, 1984). The concept of a multidisciplinary team, working in the same centre with common goals, contributed to the rapid improvement in the health outcomes of the Spanish population (see Fig. A27.5). Taking into account health expenditure, with figures around 6% of GDP, compared with health outcomes, it can be seen that Spanish primary care is highly cost-effective (Bernal-Delgado & Ortún-Rubio, 2010). Another feature of Spanish primary care is the existence of paediatricians in the team. These are responsible for the health of children below 15 years old, while patients over the age of 15 are seen by family doctors. In most of the ACs, nurses have seen their roles expand and currently they are independent decision-makers in the health care process of their patients (DOGC, 1990). Prevention, promotion, home care and community activities are carried out in coordination between doctors, nurses, dentists and social workers. This coordination has been helped by the availability of time set aside daily for joint activities, which allows the development of team-building strategies, has facilitated communication among the team members, and has also made the running of CME and research possible. The implementation of this

model has been made possible through a large investment in infrastructures and facilities adapted to the work of multidisciplinary teams, with spaces for meetings, group work and community activities.

Cooperation with secondary care and other services is standard practice, and electronic clinical records and IT systems have been a facilitator in this coordination. Catalonia has already implemented the shared clinical record between primary care and other levels of care, such as hospital and mental health (TicSalut, 2010). For example, three-quarters of all the X-ray and MRI images in Catalonia have been digitalized since the AC took over and can now be shared. Hospital discharge programmes, including primary care nurse liaison as coordinators of the process, and fast-check pathways for some early cancer detection have been implemented in various ACs (Agustí et al., 2006). Joint consultations occur more often and internet and phone advice from specialists is increasing.

**Fig. A27.5:** Shared practice

### 3.4 Comprehensiveness of primary care services

Primary health care centres in Spain are equipped for minor surgery, as well as having equipment for diagnostic purposes such as spirometers, ECG machines, retinal digital cameras, and first aid material. Over 94% of total patient contacts are handled by various health professionals in the primary health centres without referrals to other providers. The scope of services in Spanish primary health centres offers a large range of services, from promotion activities and preventive assessment, to diagnosis and follow-up for chronic conditions. Screening for particular diseases, cancers or cardiovascular risk factors is also carried out by the multidisciplinary team. Home care and community care is also in the primary care "service basket". Paediatricians

and nurses perform most of the vaccinations. In some ACs pregnancy care is carried out by GPs and in others by midwives. Health education and promotion is mostly done either at single-patient or group sessions in primary health centres. Community oriented primary care methodology is commonly used to establish health care priorities and define actions jointly with the community, in which the whole team is committed (AUPA, 2010; PACAP, 2010).

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

Disaggregated data for most of the quality indicators are not available for the whole country. Regarding primary care prescriptions, data include outpatient prescriptions, which are not always issued only at the primary care level. The average of total prescriptions per inhabitant was 1.7 in the year 2009 and 35% of all DDD was for cardiovascular drugs. Just four pharmaceutical groups – digestive and metabolism, nervous system, respiratory drugs and cardiovascular diseases – add up to 77% of all DDD. Outpatient care accounted for 18.6 DDD per 1000 inhabitants per day of prescribed antibiotics in 2006 (ESAC, 2009).

Regarding the quality standard of drug prescription, a study carried out in Catalonia from January to September 2007 in the Catalan Institute of Health, showed that 91.1% of the drugs prescribed belonged to the list of drugs with proven efficacy. Prescription of generics is also increasing, but further studies should be carried out specifically for primary care (ICS, 2007).

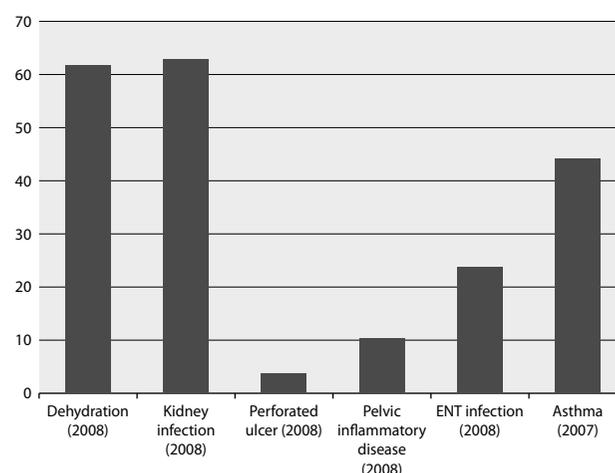
In Spain the management of chronic diseases is carried out mainly in primary health care settings. There has been an improvement in the quality of the management in most of the chronic diseases analysed in the last five years. As an example, the crude percentage of the diabetic population aged more than 25 years with HbA1C higher than 7.0%, was 64% in 2005 and 19.2% in 2009. Furthermore, the percentage of follow-up visits for COPD and asthma, carried out at primary care, were 97.6% and 91% respectively.

The vaccination coverage ranges from 87.2% for diphtheria, tetanus and pertussis to 90.4% for measles, mumps and rubella and 95.2% for hepatitis B. In 2009, 57.4% of the Catalan population aged 65 or more

were vaccinated against flu. The data are from the AC of Catalonia, which represents 15.77% of the Spanish population (Institut Català de la Salut, 2009/2010).

The number of hospital admissions for primary care sensitive conditions provides an insight into the quality of care provided at primary care level, as shown by the rates for Catalonia in the year 2008 (see Fig. A27.6).

**Fig. A27.6:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



##### 4.2 Efficiency of primary care

Efficiency of primary care in Spain varies depending on a number of factors: how long each primary care centre has existed, socio-demographic conditions of the population, number of patients on a doctor's list, and organizational characteristics of the primary care centre. It also depends on the AC and the degree of the implementation of IT support and electronic records. Professionals' performance variability is decreasing (Institut Català de la Salut, 2009/2010).

Data shown in this section relate to Catalonia. Generally speaking most of the data do not vary much across the other ACs, but in order to provide accurate data, the authors have decided to analyse only this one AC, which represents 15.77% of the total Spanish population.

Regarding home care, there has been a comprehensive and multidisciplinary home care programme, involving GPs, nurses and social workers, since 1994. This programme has contributed to the rationalization of home visits and the follow-up of patients with chronic conditions who are not able to go to the primary health centre. The programme prioritizes a proactive approach,

and this has resulted in better care and more efficient home visits. The number of home visits as a percentage of all GP–patient contacts in 2009 was 1.5%. This is a very low figure and it underlines the success of the programme (Departament de Sanitat i Seguretat Social, 1994). Telephone consultations are still not very common, mainly for cultural reasons (2.71% of all GP–patient contacts), although primary health professionals are available for telephone consultations and there is a constant increase of telephone consultations compared with previous years. Office visits to the GP lasted an average of 13.4 minutes in Catalonia in 2009. Since the introduction of the electronic prescription system in early 2010, 12% fewer patients have gone to the primary care centre for administrative issues, and the workload of doctors has improved. The average number of contacts per patient per year in 2009 was 4.3 (Institut Català de la Salut, 2009/2010).

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# 28 Sweden

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## 1. The context of primary care

### Country and population

Sweden has a population (2010) of 9.07 million inhabitants. Its governing structure consists of 21 counties and 290 municipalities. The land covers 450 000 km<sup>2</sup>, bordering the Baltic Sea, the Gulf of Bothnia, Kattegat and Skagerrak, and is situated between Norway and Finland. There are 22 inhabitants per km<sup>2</sup>.

There are several ethnic minority groups in Sweden, including the Finnish-speaking people and the Sami population (Laplanders) as well as Roma and Jewish people; 12% of the population (2003) are immigrants, mainly from other Nordic countries and from former Yugoslavia and the Middle East.

The sex ratio for the age group 15–64 years is 1.02 for male/female, and 0.8 for the age group over 65 years.

More than 80% of the population belongs to the Lutheran Church (CIA, 2010).

### Development and economy

Sweden is a monarchy with a parliamentary government. The Swedish political system is based on a mix of capitalism and a strong welfare system. The GDP (PPP) was US\$ 331.4 billion (in 2009). GDP growth dropped by 5.1% in 2009 because of the global economic recession.

**Table A28.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Sweden	EU <sup>1</sup>	Sweden	EU <sup>1</sup>	Sweden	EU <sup>1</sup>	Sweden	EU <sup>1</sup>	Sweden	EU
1995	8.0	7.6	1741	1275.9	n.a.	740.9	288.7	292.7	16.7	27.5 <sup>6</sup>
2000	8.2	7.9	2286	1608.0	n.a.	669.0	308.2	295.1	17.2	28.3 <sup>5</sup>
2005	9.2	8.5	2958	2150.9	n.a.	604.6	349.4	316.0	16.9	26.3 <sup>4</sup>
2009	9.4 <sup>7</sup>	8.8	3470 <sup>7</sup>	2788.2	n.a.	564.8	n.a.	321.6	n.a.	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Sweden	EU <sup>2</sup>	Sweden	EU <sup>1</sup>	Sweden	EU <sup>1</sup>	Sweden	EU <sup>1</sup>
1995	965.9	575.1	7.8	12.5	16.3	15.7	3.0	6.6
2000	991.8	655.9	6.8	10.3	15.5	17.7	2.8	6.8
2005	1069.4	682.7	6.3	9.5	15.1	16.2	2.8	6.8
2009	n.a.	745.5	6.2 <sup>8</sup>	8.8	15.2	15.6	n.a.	6.9

Sources: EU and Sweden average values are based on the European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008. <sup>8</sup> Year 2007.

Most of the GDP is produced by services (70.7%), industry (28.2%) and agriculture (1.1%). Unemployment was 8.3% in 2009.

Sweden spends 6.7% of GDP on education, which puts it at no. 28 in the world (2007). Only 1% of the population is illiterate (CIA, 2010). On average people received 11.6 years of education.

The Human Development Index for Sweden in 2010 was 0.885, which gave Sweden a rank of ninth in the world (UNDP, 2009).

#### Population's health

The total life expectancy in 2008 at birth is 81.0 years (male: 78.9 years and female: 83.0 years), but there are differences between the counties ranging from 81.3 to 83.4 years (OECD, 2010).

The total fertility rate is 1.67 born per woman. The under-5 mortality rate has been reduced from 8.4 per 1000 in 1980 to 2.8 per 1000 in 2009. The infant mortality rate per 1000 live-born children in 2010 is 2.74 which is ranked as the 4th lowest in the world. The maternity death rate per 100 000 deliveries is 8.

The crude death rate per year among males is 82/1000 and for females 51/1000. The death rate is slightly higher than the birth rate, and the positive growth of the population is due to immigration.

Although the overwhelming majority of Swedes enjoy good health, according to the latest report on public health and social conditions, there are some worrying tendencies, with respect to self-reported mental illness, alcohol-related problems and overweight. The proportion of people stating that they suffer from depression, fear or anxiety has increased within all age groups, and the increase is most prominent in urban areas and among single mothers. The top three diseases and injuries contributing most to the burden of diseases in Sweden consist for males and females of ischaemic heart disease, depression and neurosis, stroke, as well as alcohol addiction and self-inflicted injuries for males, and dementia and breast cancers for females (Sundhedsstyrelsen, 2010).

#### Characteristics of the health care system

The Swedish health care system is characterized by extensive decentralization. The state has overall responsibility for health care policy, but the 21 county councils and the 290 local authorities finance and

provide the majority of health care in their respective areas of liability. The national government allocates 9.1% of GDP to health care (CIA, 2010).

The counties are grouped into six medical care regions to facilitate cooperation regarding tertiary medical care. There are few private hospitals, and the number of private physicians and health centres varies very much from county to county. The 290 municipalities are responsible for nursing-home care, and the social service and housing needs of the elderly.

The health system is primarily funded through taxation. The mechanisms for paying providers vary among the county councils, but are mostly based on global budgets and per capita payments. The physicians and other health workers are mostly paid fixed salaries.

Table A28.1 shows that Sweden spends above the EU average on health care. Although there are relatively many physicians and nurses working, the percentage of GPs of all physicians is far below the EU average. The number of hospital admissions are almost similar as the EU average, although the length of stay, and number of outpatient contacts per person are relatively low.

## 2. Structure of the primary care system

### 2.1 Primary care governance

No policy documents have been issued in Sweden that reflect a clear vision on current and future primary care (Sveriges läkarförbund, 2010). In 1994, a non-socialist coalition government introduced the Family Doctor Act and the Act on Freedom to Establish Private Practice (1994). However, in 1994, the Social Democrats returned to power, and in June 1995 these two laws were withdrawn before they were fully implemented. Even though they were withdrawn, these laws fostered some reform in the primary care sector. Several counties had already started to make changes in their delivery of primary care as a result of the Family Doctor Act. This Act allowed the county to organize outpatient primary care in such a way that all residents within the county council were able to choose a family doctor (GP). Freedom of choice was extended to cover the services of private GPs who did not have contracts with the county councils. Traditional primary care, which consisted of collaboration with district nurses within geographically determined responsibility areas, was replaced by the

family doctor system. Payments from the county councils were to be partly based on a monthly fixed fee (capitation) per listed individual, and partly on a fee-for-service basis. Thus, the family doctors were given financial incentives to attract patients. The main objective of the reform was to improve accessibility and continuity in primary care. The Act on Freedom to Establish Private Practice increased the possibilities for establishing private practice by taking away the county councils' ability to regulate the number, and reimbursement of private practitioners. The county councils were supposed to have implemented the family doctor reform by the end of 1995, but in June 1995 the new Social Democrat government abolished both the Family Doctor Act and the Act on Freedom to Establish Private Practice. Among other things, the Family Doctor Act, together with the Act on Freedom to Establish Private Practice, resulted in increased privatization of primary care in some counties (Glenngard et al., 2005).

The general purpose of primary care is to improve the general health of the population and to treat diseases and injuries that do not require hospitalization. Primary care is also responsible for guiding the patient to the right level within the health care system. According to a government decision in 1995, all physicians in primary care must be specialists in general practice. GPs provide treatment, advice and disease prevention. The other practitioners directly employed at this level are nurses, midwives, physiotherapists and gynaecologists. Each county council has the freedom to decide how to serve its population in terms of primary care.

There is not a sharp distinction between primary care and specialized hospital care, as the owners and governing bodies (county) are the same, and hence there is no special primary care department in the Ministry of Health in Sweden (Sveriges Kommuner och Landsting, 2010). The primary care budget is part of the national budget, of which 70% is based on municipal taxes.

Private health centres and practitioners are relatively common in major cities and in urban regions. In 2003, Sweden had around 1100 health centres, of which approximately 300 were privately run. From an international perspective, Sweden has relatively few physician contacts per person. During 2003, the number of outpatient (health centre units, public and private) contacts in Sweden was 2.8 per person. The quality of health care is regulated by national law. The Health and Medical Service Act regulates the distribution of primary care providers and centres across the country.

The counties govern health care, and there are different regulations in the counties as to organization and priorities. Providers are regulated on a regional level (Ministry of Health and Social Affairs, 1982). The National Board of Health of Sweden is the overall quality controller of the health sector (Glenngard et al., 2005).

The National Board of Health and Welfare (Sundhedsstyrelsen, 2010), a semi-independent public authority, has a supervisory function over the counties for health and social services. The Board supervises implementation of public health matters and legislation. The Board is the licensing authority for physicians and other health service staff, and has authority under European Community directives for mutual recognition of diplomas and certificates for the health professions. The national structures responsible for quality assurance in health care are, in addition to the National Board of Health and Welfare, the Medical Responsibility Board, the Medical Products Agency, the Swedish Council on Technology Assessment in Health Care, the Pharmaceutical Benefits Board and the National Institute of Public Health.

There are national quality registers covering the whole Swedish population. The register of waiting times and the Health Care Barometer are operated under the auspices of the Federation of County Councils (Glenngard et al., 2005). Economic conditions of primary care

Since each county develops and runs its own health service, the money allocated to health care may differ between the counties, but the whole population has access to health services. There are no official statistics available of the total expenditure on primary care. According to the OECD, in 2007 33.2% of the total health expenditure was spent on outpatient care, and 3.5% on prevention and public health (OECD, 2010).

Sweden has a state health insurance system that includes everyone. There has been an increase in private health insurance, and in 2008, 16% of the population had private insurance, of which 87% was paid by the employer (FAFO, 2010). There is a co-payment system for patients in Sweden, but the fees differ across the counties. Children up to 18 years old do not pay fees. Co-payment for visits to GPs range from SEK 150 to SEK 300 (€14.69–29.38). Co-payments for visits to medical specialists range from SEK 300 to SEK 400 (€29.38–39.17), and for nurses and other health professionals they range from SEK 80 to SEK 150 (€7.83–14.69). Higher fees apply for out-of-

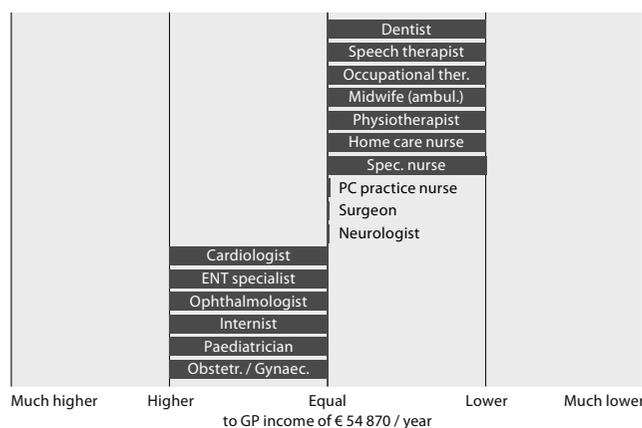
hours consultations. There is a ceiling for co-payments: from SEK 900 per year (€88.14) patients receive a reduction, until the maximum of SEK 1800 (€176.29) is reached, and all care is free of charge in that year (Läkemedelsverket, 2011). A survey in 2007 indicated that 4% of the respondents rated general practice care as not very or not at all affordable (European Commission, 2007).

Organization of primary care varies across the counties. Most health centres are owned and operated by county councils, and GPs and other staff are salaried employees. Payment of public primary care providers is largely based on capitation, topped up with fee-for-service and/or target payments. The number of private primary care providers and ambulatory specialists working under a public contract is increasing; in some counties about half of primary care physicians are private. Fee-for-service arrangements with cost and volume contracts are more common for payment of private providers, in particular for ambulatory specialists (Glenngard et al., 2005).

As said, most GPs are employed by the counties and receive fixed salaries (Sveriges läkarförbund, 2010). On average, the national annual salary for male GPs is €58 500 and for female physicians €51 240.

The average annual income of GPs (€54 870) is equal or slightly lower than the average annual income of medical specialists, in particular in the rural areas the difference is highest (see Fig. A28.1). Compared to primary care nurses/practice nurses, specialized nurses, home care nurses, physiotherapists, midwives, occupational therapists and speech therapists, GPs have a higher annual gross income. GPs also earn more than dentists.

**Fig. A28.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



Resource-allocation principles vary among the county councils. Most county councils have decentralized a great deal of the financial responsibility to health care districts, through global budgets. Activities such as psychiatry, geriatrics and emergency services are normally financed through national budgets. In about half of the county councils, payments to both hospitals and primary care centres are based on national budgets (Sveriges Kommuner och Landsting, 2010). Among others, a smaller group of about five county councils continues to develop per-case payment, with expenditure ceilings for some services (primarily hospitals) and capitation models for primary care. In another group of counties payment for primary care is moving in the direction of capitation, whereas national budgets are used for all other services. Capitation payment was introduced in 1993–1994 when the law relating to family doctors was introduced.

#### Primary care workforce development

Sweden employs more resources in the health sector than most other OECD countries. In 2006 (latest year available), Sweden had 3.6 practising physicians per 1000 population, compared with an average of 3.2 in OECD countries in 2008. Sweden also had 10.8 nurses per 1000 population in 2006, compared with an OECD average of 9.0 in 2008.

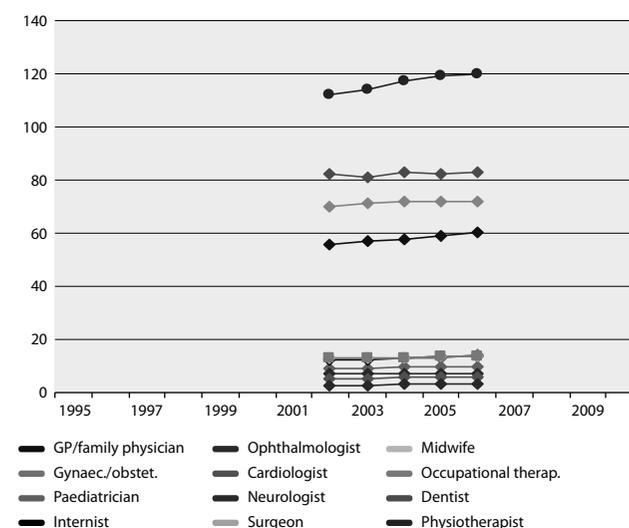
On the other hand, the number of acute care hospital beds in Sweden was 2.2 per 1000 population in 2005 (latest year available), below the OECD average of 3.6 in 2008. As in most OECD countries, the number of hospital beds per capita in Sweden has fallen over time, coinciding with a reduction of average length of stay in hospitals (OECD, 2010).

In real terms, the number of health care staff has decreased since the beginning of the 1990s, with the exception of physicians, nurses and midwives. The number of staff employed in the health care sector, expressed per 1000 inhabitants dropped from 46.7 in 1992 to 31.9 in 2002. The main reason for this reduction in staff was structural change, that is, a shift from hospital care towards primary care. The total number of hospital beds was reduced by more than 40% between 1993 and 2003, and this reduction caused a decrease in the average length of stay. In 2002, about 27 000 registered physicians and 91 000 registered nurses were employed by the counties in Sweden. There were approximately three physicians per 1000 inhabitants. Physician density varies among counties from approximately 2.3 to 4.4

physicians per 1000 inhabitants. Sweden has a relatively high proportion of physicians working in hospitals in comparison with the other Nordic countries. More than 60% of all physicians work in hospitals. The number of physicians and nurses has increased slightly faster than the growth in population since the mid-1990s. Expressed as health care personnel per 1000 inhabitants, the number of physicians and nurses has increased, whereas the number of dentists and other health care personnel has been quite stable during the past decade.

Compared to its Nordic neighbours (Denmark, Finland and Norway), Sweden had fewer physicians per 1000 inhabitants in 2000. The number of physicians per inhabitant for Sweden was also below the EU average. There were more nurses in both Norway and Finland in 2000 than in Sweden, but Sweden was above the EU average and at the same level as Denmark. Viewed over the past 20 years, Sweden had more physicians per 1000 inhabitants than Norway and Finland until the mid-1990s (Glenngard et al., 2005). Fig. A28.2 shows the development in supply of primary care professionals in the most recent five-year period (Eurostat, 2010; OECD, 2010).

**Fig. A28.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Sources: Eurostat, 2010; OECD, 2010.

There is no specific legislative regulation describing the specific tasks and duties of health professionals.

The reform of 1992 transferred the responsibility for follow-up of discharged patients from hospitals to the primary care sector, which led to an increased need

for health care personnel in the latter sector. The municipalities are experiencing difficulties in recruiting nurses and paramedical staff, and the social services are increasingly facing complex needs, for example patients with multiple diagnoses. This requires integrated care between the county councils and the municipalities for those elderly people who need extensive assistance.

The Board of Social Care is responsible for providing the regional health authorities with an overview of the workforce needs, but there are few data available for this.

There are no exact data on the percentage of graduates choosing to enrol in postgraduate training in family medicine, but Swedish experts estimate this to be about 25%. All six universities in Sweden with medical education have departments of family medicine.

There are national associations for both GPs and district nurses (Sveriges läkarförbund, 2010). There are several primary care related journals, including the general practice journal *AllmänMedicin* a journal on rural medicine called *Distriktsläkaren*, the *Scandinavian Journal of Primary Health Care* and *Halsan I centrum* (Health in Focus).

### 3. Primary care process

#### 3.1 Access to primary care services

In Swedish primary care the population has direct access to most specialists as well as to GPs. However, in rural areas where there are few or no specialists available, GPs are the main entrance level for care and may refer the patients to specialists if necessary.

The density of GPs varies across the country, ranging from 2.2 per 1000 inhabitants in Stockholm to 3.0 in Jämtland (Sveriges Kommuner och Landsting, 2010). Nationwide modest shortages of GPs exist. The accessibility of health care is under pressure, as there are already shortages of doctors in many specialist fields and, in certain parts of the country, many doctors will be retiring within the next 10 to 15 years (Sveriges läkarförbund, 2010).

A survey in 2007 showed that overall, only 63% of the patients find it easy to reach and gain access to GPs (European Commission, 2007). According to the Health and Medical Services Act, the counties are obliged to provide health care services to the population in ordinary

working hours and access to emergency care at other times (Ministry of Health and Social Affairs, 1982). Almost all GPs provide telephone consultations, they usually have a practice web site and use an appointment system, but they rarely provide any e-mail consultations (Dobrev et al., 2008).

There are no official statistics available on the average number of working hours of GPs per week. A survey in 2009 showed that 59% of the GPs work more than 40 hours per week. On average, 66% of their working hours are spent on direct patient care (Faber, Voerman & Grol, 2009). Data from 1991 showed that an average consultation takes 21 minutes (Wilson, 1991). It is estimated that on average a GP performs 1–2 home visits per week.

Acute and emergency cases are taken care of by hospital-based acute wards. A few primary health providers have organized after-hours care.

Several initiatives are being implemented to improve general access to health services and to treatment. According to an agreement between the county councils and the central government, all non-acute patients should be able to see a primary care physician within seven days, visit a specialist within 90 days after referral by a GP and obtain treatment within 90 days of the prescription of treatment by a specialist. Most county councils struggle with longer waiting times for at least some patients and services (particularly for elective surgery). If patients are required to wait more than 90 days, they can choose an alternative provider with assistance from their county council. In primary care, residents in several counties are encouraged to choose a provider based on their own assessment of access and quality, with money following the patient. A parallel policy is to increase the number of private primary care providers and encourage general competition for registration by residents. At the same time, however, there is a call for closer collaboration between primary care providers, hospitals and nursing-home care, particularly where care of older people is concerned. There are similar calls for increased integration of health and social services for mental health patients.

#### 3.2 Continuity of primary care services

Traditionally, health centres have been responsible for providing primary care to residents within a geographical area. This model is being replaced, with increased

**Table A28.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Woman aged 35 with psychosocial problems</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	<ul style="list-style-type: none"> <li>• Woman aged 20 for confirmation of pregnancy</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Mild depression</li> <li>• Patients admitted to a nursing home/convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Fundoscopy</li> <li>• Strapping an ankle</li> <li>• Setting up an intravenous infusion</li> </ul>	<ul style="list-style-type: none"> <li>• Insertion of IUD</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Routine paediatric surveillance of children up to 4 years</li> <li>• Infant vaccination for diphtheria, tetanus, pertussis, measles, hepatitis B, mumps, and rubella</li> </ul>	<ul style="list-style-type: none"> <li>• Family planning/contraceptive care</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> <li>• Problematic alcohol consumption</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

possibilities for residents to choose their provider and physician (within a centre to which they are assigned) (Glenngard et al., 2005; Sveriges Kommuner och Landsting 2010).

There is no personal doctor or list system in Swedish primary care (Sveriges läkarförbund 2010). Patients are free to go directly to medical specialists. Fifty-five per cent of the population reported having very high confidence in the primary care system in Sweden, and 80% had a favourable perception of their latest visit to a health centre (Swedish Association of Local Authorities and Regions & Swedish National Board of Health and Welfare, 2008).

All physicians are obliged by law to keep medical records of all patient contacts. GPs usually have a computer at their disposal in their office, which they use for their financial administration, prescription of medicines and communicating this to pharmacists, keeping medical records, and searching expert information on the internet.

GPs do not commonly use their computer for booking appointments with patients or for communicating patient information to specialists (Dobrev et al., 2008).

Referral letters are almost always used by GPs to refer a patient to medical specialists. Primary care practices occasionally receive information within 24 hours about contacts that patients have with out-of-hours services. Specialists almost always communicate back to referring GPs after an episode of treatment.

### 3.3 Coordination of primary care services

Primary care has no formal gatekeeping function. Residents may choose to go directly to hospitals or to private specialists contracted by county councils. Patients can go directly to gynaecologists, paediatricians and speech therapists. For access to a specialist in internal medicine, an ophthalmologist, ENT specialist, cardiologist, neurologist and surgeon, they usually need referrals. Increasingly, residents are encouraged to visit

their primary care provider first. Higher co-payments for specialist visits are used to support such behaviour (Glennard et al., 2005).

It is quite common to find primary health centres with both GPs and practising nurses. There are also centres which contain physiotherapists and social workers in addition. GPs frequently have face-to-face meetings with other primary care workers. Task substitution, for example through nurse-led diabetes clinics in primary care and nurse-led health education, are very common.

It is quite usual that specialists visit primary care centres to provide care normally provided in hospitals, and to provide joint care with the GPs. Specialists are sometimes invited to give lectures for GPs. There is generally good collaboration between medical specialists and GPs.

GPs use medical records to identify health needs or priorities for health policies. Seventy-eight per cent of them reported routinely analysing the clinical outcomes of their practice. Furthermore, nationwide community health surveys are conducted at regular intervals to improve the quality of primary care.

#### 3.4 Comprehensiveness of primary care services

Swedish primary care centres are well equipped, with infant scales, glucose tests, dressings/bandages, otoscope, ECG, urine strips, instruments for stitching wounds, gynaecological speculum and peak flow meter.

The GP is usually the provider of first-contact care in the case of children with severe cough, but some may seek a paediatrician if available (see Table A28.2). A child with a hearing problem may also seek help from a GP, while women aged 18 may ask a gynaecologist for contraceptives. For confirming pregnancies women would go to a gynaecologist, except in rural areas where there is no gynaecologist available, the same would apply for 35-year-old women with irregular menstruation. Women aged 35 with psychosocial problems would always go to a GP. Women aged 50 with a lump in a breast would usually go to a GP, just as men would with suicidal inclinations, or with alcohol problems.

Patients with chronic bronchitis, peptic ulcer, congestive heart failure, pneumonia, diabetes II, rheumatoid arthritis, mild depression, cancer in need of palliative care and patients in need of admittance to a nursing home would always or usual go to a GP as a first contact.

GPs have an active role in preventive care such as immunization against tetanus, allergy vaccination, testing for sexually transmitted diseases, influenza vaccination and cholesterol level checking. Screening for HIV/AIDS, cervical cancer screening and breast cancer screening would almost never be performed by GPs. GPs and practice nurses are responsible for the standard national vaccination programmes.

GPs are responsible for providing counselling for health-promoting activities. (see Table A28.2: GPs' involvement in delivery of various primary care services)

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

Swedish GPs are on average producing 10 600 prescriptions per 1000 population according to the Sosialstyrelsen 2009 (Sundhedsstyrelsen 2010). In several county councils, primary care providers are financially responsible for prescribing costs, which creates incentives to control pharmaceutical expenditure.

The vaccination coverage in the population is 96.7–98.4% (a variance between the different vaccines). At the national level, the Swedish Council on Technology Assessment in Health Care (SBU) and the National Board of Health and Social Welfare support local government by preparing systematic reviews of evidence and guidance for priority-setting respectively. At the local and clinical level, medical quality registers managed by specialist organizations play an increasingly important role in assessing new treatment options and providing a basis for comparison across providers. Transparency has increased and some registers are now at least partly available to the public. Since 2006, performance indicators developed by the National Board of Health and Welfare are partly used by the counties. Further improvements in the transparency of national quality assessment include setting up a register of drug use. Concern for patient safety has been growing. The five most important areas with potential for improvement are: unsafe drug use, particularly among older people; hospital hygiene; falls; routines to control for fully avoidable patient risks; and communication between health care staff and between staff and patients.

#### 4.2 Efficiency of primary care

Swedish health care policies during the past 25 years have focused on patients' rights, as demonstrated by the priority given to patients in great need of health care services, increased opportunities for patients to choose the health care provider, and improved health care guarantees. The waiting time for health care services varies greatly depending on the type of service required and the specific county council involved. In 2003, 90% of all patients acutely in need of care (i.e. 45% of total contacts in primary care) received a consultation with a physician on the same day; the remaining 10% were seen within two days. With regard to consultations at hospitals, in some areas more than 87% of patients had an appointment within three months, yet in other areas only 47% were able to see a physician within the same period of time. For treatment at hospitals, the waiting times varied even more. In some counties, as many as 94% of patients received treatment within three months; the corresponding figure for some other counties was as low as 23% (Sveriges Kommuner och Landsting, 2010).

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# 29 Switzerland

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## 1. The context of primary care

### Country and population

Switzerland is a country of 7.79 million inhabitants in a territory of 41 300 km<sup>2</sup> (OFS, 2010) and 60% of the territory is mountainous. This means that population density is 188.8 inhabitants/km<sup>2</sup> (Eurostat, 2010). It is divided into 26 “cantons” and four different languages are spoken: German by 63.7% of the population, located in the northern and central parts of the country, French by 20.4%, in the west, Italian by 6.5% and Romansh by 0.5% in the south-east. It is worth noting that 8.9% of the population has a mother tongue other than those four national languages (OFS, 2010). The 2009 population growth was 1.43%, due to strong immigration, with 21.7% of inhabitants being of a foreign nationality. The total fertility rate is 1.48 children per woman, 21.2% of the inhabitants are aged under 20 years and 16.6% are over 65 years (50.8% are women). Population density varies greatly between cantons, from 26.2 in Graubünden to 5046 hab./km<sup>2</sup> in Basel-stadt (Eurostat, 2010).

### Development and economy

Switzerland is a federal parliamentary democratic republic, with three levels of political decisions: the Federal Council, the cantons, which have their own constitution and delegate some of their power to the federal state, and the municipalities. The country has two specificities: international neutrality, which has been internationally recognized since 1815; and direct

**Table A29.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Switzerland	EU <sup>1</sup>	Switzerland	EU <sup>1</sup>	Switzerland	EU <sup>1</sup>	Switzerland	EU <sup>1</sup>	Switzerland	EU
1995	9.6	7.6	2568	1275.9	550 <sup>8</sup>	740.9	316	292.7	11.7 <sup>9</sup>	27.5 <sup>6</sup>
2000	10.2	7.9	3217	1608.0	410 <sup>8</sup>	669.0	351	295.1	11.2 <sup>9</sup>	28.3 <sup>5</sup>
2005	11.2	8.5	4015	2150.9	360 <sup>8</sup>	604.6	380	316.0	13.6 <sup>9</sup>	26.3 <sup>4</sup>
2009	10.8 <sup>7</sup>	8.8	4417 <sup>7</sup>	2788.2	350 <sup>7,8</sup>	564.8	385 <sup>7</sup>	321.6	13.6 <sup>7,9</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Switzerland	EU <sup>2</sup>	Switzerland	EU <sup>1</sup>	Switzerland	EU <sup>1</sup>	Switzerland	EU <sup>1</sup>
1995	–	575.1	–	12.5	–	15.7	8.3	6.6
2000	1287 <sup>10</sup>	655.9	12.8 <sup>10</sup>	10.3	15.5	17.7	8.8	6.8
2005	1407 <sup>10</sup>	682.7	11.7 <sup>10</sup>	9.5	14.8	16.2	–	6.8
2009	1489 <sup>7,10</sup>	745.5	10.9 <sup>7,10</sup>	8.8	15.5	15.6	4.0 <sup>7,10</sup>	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010). Switzerland values are based on WHO values unless specified (OECD & WHO, 2006).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year 2007 instead of 2009. <sup>8</sup> OECD values (displayed) are different from WHO ones (respectively 856.4, 626.3, 553.9 in 1995, 2000 and 2005). <sup>9</sup> OECD values (WHO values are the same except for year 1995: 20%). <sup>10</sup> OECD values (no WHO data). <sup>11</sup> OFS data and Year 2008 instead of 2009.

democracy, in which every citizen who manages to gather enough signatures can modify the Constitution, vote or change a law. This is called “popular initiatives”.

Switzerland is the 36th largest world economy in 2007, based mainly on services, especially the banking and insurance sector. GDP per capita is 9th in the world in 2007, with a value of PPP\$ 41 618 (IMF, 2010). Switzerland ranked 9th in the Human Development Index with 0.960 (UNDP, 2010). Unemployment is low: 3.7% of active population in 2009, more prevalent in the foreign population (7.2% vs. 2.7%) (OFS, 2009b).

Concerning education, 86.8% of the population has finished the secondary level of education (Eurostat, 2010).

#### Population's health

Life expectancy at birth in Switzerland is one of the highest in Europe: 84.6 years for women, 79.8 years for men in 2008 (Eurostat, 2010) and healthy life expectancy at 65 respectively is 13.5 and 13 years in 2007 (OFS, 2009a). Infant mortality was 3.9 deaths for 1000 living births in 2007. Causes of death are quite similar in order

between men and women: cardiovascular diseases are the main cause (39.6% for women, 34.2% for men), followed by cancer (22.8% and 29.9% respectively). External causes are then more preeminent for men (7.8% vs. 4.7% for women) and mental disorders for women (6.6% vs. 3.5% for men) (Eurostat, 2010).

#### Characteristics of the health care system

The Swiss health care system is mostly organized at two levels: federal and cantonal. The main responsibilities of the federal state for health are insurance provision, quality of environment (food, transmissible diseases), certification of professionals and disposals (including drugs), statistics provision and some actions in health promotion. The cantons are responsible for health care provision, both in the hospital and ambulatory sectors, and prevention. This distribution of levels of decision is not without drawbacks. In 2006 the OECD report recommended the elimination of redundant and excessive health provision between cantons and the promotion of national health prevention by creating a pluri-cantonal level of decision (OECD & WHO, 2006). Every Swiss resident has to subscribe to a mandatory health insurance

in his or her canton. Swiss residents can choose from several providers, in a competitive market, but all insurers should follow these rules: a purpose of non-profit, a minimal health goods basket, obligation of insurance without restrictions and uniform fees whatever the risks or the income. Cantons and Confederation provide financial help to get this insurance for those with the lowest incomes (Confédération Suisse, 1994).

Total health care expenditure in Switzerland is above the EU average, as is the number of physicians per 100 000 population. Average length of stay in hospitals is slightly longer compared to the EU average, whereas the number of admissions per 100 000 population is comparable with the EU average in 2009 (see Table A29.1).

## 2. Structure of the primary care system

### 2.1 Primary care governance

There are currently several policy documents published by Swiss public institutions (ASSM) or non-governmental organizations (e.g. *Federatio Medico Helveticorum*, Swiss Society of General Practice, Swiss Society of Internal Medicine, see section 2.3). However, none of them has been formally endorsed by the Swiss government. These documents reflect diverse visions on present and future primary care. They have a common denominator: the importance of promoting primary care through several means such as political promotion of primary care by encouraging young physicians to get involved in family medicine, providing adequate training facilities and operational settings. A citizen's initiative called "Oui à la médecine de famille" ("Yes to the family physician") has currently gathered enough signatures to be put on the agenda for debate at the federal level and eventually accepted by the Swiss population through voting afterwards. This initiative wants to modify the Constitution and includes three principles: access to family medicine for all, ensure a high-quality of care in family medicine and to promote family medicine among young physicians (Confédération Suisse, 2010).

Currently, governance in primary care consists mostly of licensing physicians, which is a federal-level decision. But authorization of primary care practices to operate depends on cantonal health authorities, cantonal/local medical associations and health insurance companies. They provide a concordat number to physicians, which allow them to be reimbursed by insurance. Stakeholders

contributing to the primary care policy development are the FMH (Swiss Medical Association), the Conference of Regional Health Directors and cantonal or regional primary care professionals' associations. Some local authorities provide facilities to be rented by health professionals in order to promote primary care but there are not yet any pro-equality measures, although some shortages in certain regions have been described. There is no policy on cooperation of primary care services. No laws have been implemented concerning patients' rights, but access to their own medical files and the confidential use of medical records are laid down in the health professionals law (Confédération Suisse, 2006).

For Swiss physicians, there is an obligation of 80 hours in-service training per year and regular meetings are organized by regional and national primary care medical associations. But evidence-based guidelines have not been produced yet for specific use by GPs (FMH, SIWF & ISFM, 2009).

### 2.2 Economic conditions of primary care

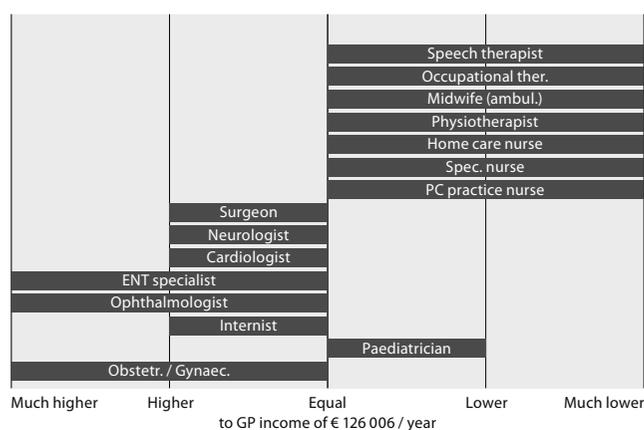
The primary care budget in Switzerland is not specifically identified, but an estimation of it, made by calculating it from primary care expenses, including all ambulatory drugs prescribed, including those by specialists, is around 25.6% (€11.6 billion) of total expenditures on health (Santésuisse, 2010).

Due to the obligation for every person living in Switzerland to be insured, 99.2% of the population is fully covered or insured for primary care costs, including general practice services and prescribed medicines. The remaining 0.8% corresponds to people who do not contract insurance, such as illegal migrants, people outside the social network and foreigners with international insurance. As mandatory insurance is contracted directly by the patient (and not taken at the source of its income, for example), 30% of the population benefits from social aid funding for care either totally or partially. But, in fact, almost 66% of the costs of primary care physicians are "out-of-pocket" expenditures, because patients have a deductible of CHF 300–2500 (€225–1875), depending on the insurance contract, and 10% of the physician's fee up to CHF 700 (€525) a year after this limit is reached (Confédération Suisse, 1994; Santésuisse, 2009). The exact cost of health care is unknown, because many patients have a high deductible and do not send their invoices to health insurance companies.

Primary care physicians, including GPs, paediatricians and internal medicine physicians, are, for the great majority, self-employed with a contract to the health insurer. Health insurers have the obligation to reimburse all physicians with a concordat number (this topic is currently under debate in Switzerland as health insurers would like to have the right to choose which physician can be reimbursed). They are paid on an exclusive fee-for-service basis, regulated by the law. A number of points are allocated to each activity uniformly in Switzerland, but the value of one point varies from one region to another, depending on the local regional income. It is also worth noting that, rarely, some physicians create small companies and are employed by those independent companies.

The mean gross annual income for self-employed GPs in Switzerland in 2005 was €126 006, after accounting for practice costs but before tax (Hasler & Reichert, 2010) (see Fig. A29.1).

**Fig. A29.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



Source: Hasler & Reichert, 2010.

### 2.3 Primary care workforce development

The core of the primary care workforce in Switzerland mainly relies on GPs and ambulatory specialists of internal medicine. Both types of doctors are doing a similar job at least in urban areas, with a concordat number recognized and delivered by health insurers. Both will be referred to as family physicians in this report. A project has been approved by the Swiss GPs association and internal medicine association to give up their own certified-board title and replace it by one single title of family physician. Paediatricians work alongside GPs in the primary care workforce and are responsible for the care of those under the age of 16. Gynaecologists are also

part of primary care for some clinical situations, such as Pap smear tests and oral contraception, but more often they are seen on referral.

The other medicine specialties work mostly through referral. However, patients are free to seek specialized care, even without a referral. No gatekeeping exists in Switzerland, unless patients subscribe to one of the few HMO-based (health maintenance organization) insurance contracts. However, home care nurses are not directly accessible without a referral and there is limited access to specialized nurses are rare. Currently there are no primary care nurses in Switzerland. Visits to rehabilitation professionals are only refunded if prescribed. Dentists are covered by insurance only if the patient contracted a special private insurance: few people are covered for that aspect of care (Confédération Suisse, 1994).

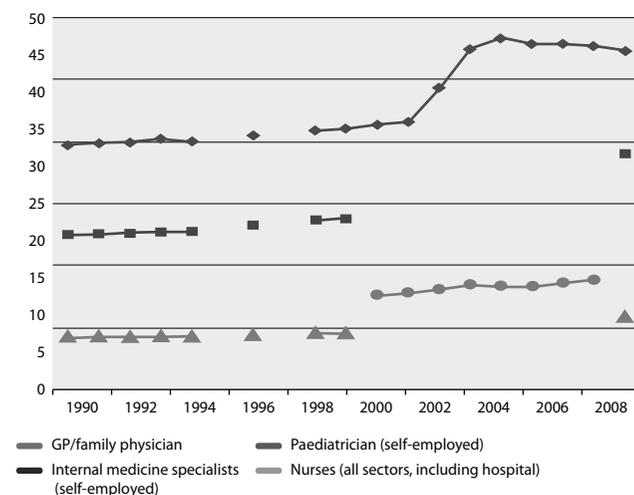
The average GP is 52.6 years old and 75% of them are aged over 45. The mean workload for a self-employed GP is around 44 hours: 8.8 half-days every week, 1 half-day being 4–6 hours (Kraft, 2010). These data reflect the average working hours of both full-time and part-time physicians, and may underestimate the real workload of full-time self-employed GPs.

General practice is a subject in the undergraduate medical curriculum and the postgraduate family medicine programme lasts a minimum of five years, with at least one year in an ambulatory setting or in a primary care service. Primary care pre-graduate training (in an ambulatory setting) is the responsibility of the five Swiss medical schools (Basel, Bern, Geneva, Lausanne and Zurich). Teaching is provided by primary care university departments and the five family medicine academic institutes. Postgraduate training is provided by hospitals, outpatient clinics and some private practitioners, all accredited by the FMH. The FMH at the federal level is responsible for the validation of the postgraduate training. Around 45% of all medical graduates choose a primary care discipline: between 9.7% in German medical schools and 21.4% in canton de Vaud in general practice, around 8% in internal medicine and around 15% in paediatrics (Buddeberg-Fischer et al., 2006; Jeannin, Meystre-Agustoni & Paccaud, 2007). Currently, the ratio of GPs to total number of specialists is 0.78 in 2004 (Observatoire suisse de la santé, 2007). By 2030, a deficit in family physicians is expected, which might lead to up to 40% of primary care consultations not being able to be carried out. This projection is based on the

increased rate of primary consultations between 2001 and 2006 (Seematter-Bagnoud et al., 2008). Network and community orientation are currently existing specializations for self-employed nurses: a Certificate of Advanced Studies (25 days in one year) is available under the title “Liaison and orientation in the health care network” and a Diploma of Advanced Studies (> 1050 hours of lectures over two years) called the “Diploma in community action and health promotion”.

Four different medical associations exist: the College of Primary Care Medicine, to coordinate activities in primary care settings and promote quality, training and research; the Swiss Society of Internal Medicine; the Swiss Society of General Practice; and the Association of Family and Childhood Physicians. The aim of the latter is to represent the political interests of primary care physicians in Switzerland and has been created recently. Nurses have the Swiss Association of Nurses. There is a main journal edited in Switzerland on family medicine, called *Primary Care*, but it is not usually a platform for scientific publications. *Praxis* is also a journal dedicated to ambulatory care, in the German language.

**Fig. A29.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



Note: Definition of practising physicians has changed between 2000 and 2007 and the numbers cannot be compared with previous and further data. A sharp increase of GPs between 2001 and 2003 is due to a reform of GP's licensing, but data is still comparable. No data for nurses before 2000.

### 3. Primary care process

#### 3.1 Access to primary care services

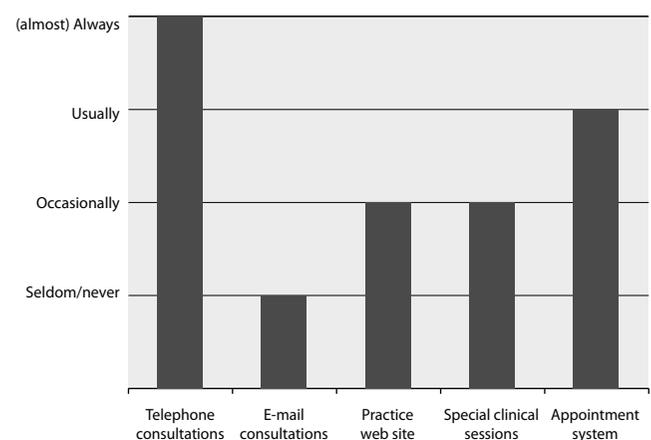
Accessibility of primary care is not currently a major concern in Switzerland, with the exception of shortages

in some rural regions, but it may become one in the coming years. The availability of GPs is very different between cantons, with densities varying from 706 GPs per 100 000 population in Schwytz to 167 in Basel-Stadt (FMH, 2009). Average density of GPs is 78 per 100 000 inhabitants in rural areas, compared to 127 in the five major cities of Switzerland (Basel, Bern, Geneva, Lausanne and Zurich). These numbers have to be interpreted cautiously as difficulties remain in Switzerland with regard to the calculating the exact number of physicians. Indeed, the FMH keeps records of all physicians with a title of specialist (including GPs), independently of their real activity as physicians, that is, whether they work part time or have retired.

There is a legal obligation for after-hours care services, but the systems vary between the cantons. They are mainly based on after-hours primary care centres and practice-based services. The affordability of general practice seems quite good in the country, but there is no national survey regarding the satisfaction of Swiss people with primary care.

Telephone consultations are common in Switzerland and most practices have an appointment system in place. E-mail consultations are rare (see Fig. A29.3).

**Fig. A29.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Source: Switzerland expert panel.

#### 3.2 Continuity of primary care services

GPs do not currently have a patient list system and there is no data about how the management of such lists might work in practice. It is not encouraged at all by the

structure of primary care in Switzerland, but 87.9% of the adult population declare having the intention to see their GP for common health problems (OFS, 2008a).

Around 90% of GPs report keeping clinical records of their patients routinely, but these records are not used to obtain epidemiological information about the community. Communication with secondary care and the out-of-hours services is bidirectional and works well.

### 3.3 Coordination of primary care services

No compulsory gatekeeping occurs in Switzerland, unless the patients subscribe to HMO-like insurances, in order to pay lower premiums. Patients are free to seek advice directly from a specialist or from multiple physicians for the same condition.

Around 63% of primary care practices are single-handed and cooperation within primary care is generally rare. Face-to-face meetings occur with other GPs and nurses but rarely with other professionals, including specialists. Phone contacts are more frequent, especially with internists, surgeons, neurologists and dermatologists, for example. Joint consultations or replaced care do not occur. Ambulatory health education structures are very uncommon too. In the medico-social field, it is worth noticing that social workers have both the responsibility for social care and community mental health care duties.

### 3.4 Comprehensiveness of primary care services

GPs in Switzerland offer a large range of services, including diagnosis and follow-up for chronic conditions (see Table A29.2). They are maybe less used and less inclined to provide services for gynaecological problems or minor surgery, but it depends on the medical environment. Wedge resections, for example, are more usual in rural regions.

They are formally responsible for one act of prevention and health promotion: vaccinations. Other health promotion and prevention interventions depend on the physician's own interests.

Almost all (99%) of medical contacts with a GP are handed solely by the professional.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

Using only 6 DDD of antibiotics per 1000 inhabitants per day, ambulatory physicians in Switzerland are among the lowest prescribers of those drugs in Europe.

Among the population known to have diabetes, in 2007:

- 40% were overweight, 25% obese
- 54% had a blood pressure above 140/90 mmHg
- 42% had a LDL-cholesterol serum level above 5 mM (OFS, 2008b).

No data have been collected about the HbA1C level or eye fundus inspection. In the same way, no national data are available about the follow-up of asthma or COPD.

The vaccination coverage of infants is high: 95% for diphtheria, 96% for tetanus, 94% for pertussis, 87% for measles, 86% for mumps and rubella at the age of 2 (Office Fédéral de la Santé Publique, 2008). Of the population aged 60+, 41% are vaccinated against flu (OFS, 2008b).

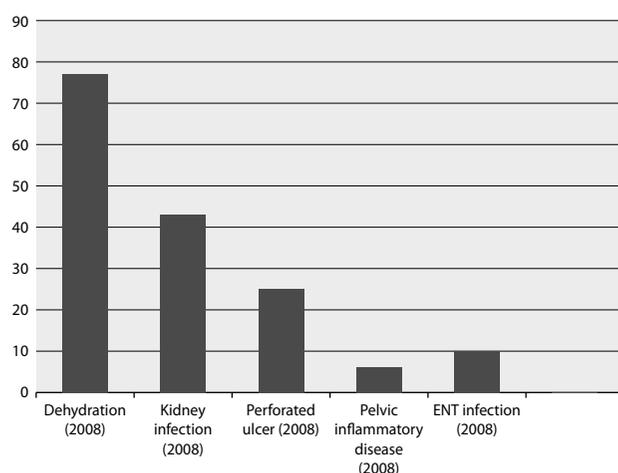
In 2007, 52% of women aged 52–69 had at least one mammogram in the past three years in 2007 and 71% of women aged 21–64 had at least one Pap test (cervical cytology test) in the same timeframe (OFS, 2008b). Fig. A29.4 shows the number of hospital admission for cases with a primary care sensitive diagnosis.

**Table A29.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Woman aged 35 with psychosocial problems</li> </ul>	<ul style="list-style-type: none"> <li>• Man aged 28 with a first convulsion</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Rheumatoid arthritis</li> <li>• Mild depression</li> <li>• Cancer (in need for palliative care)</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Joint injection</li> </ul>	<ul style="list-style-type: none"> <li>• Wedge resection of ingrown toenail*</li> <li>• Insertion of IUD</li> <li>• Removal of rusty pot from the cornea</li> <li>• Setting up an intravenous infusion</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization from tetanus</li> <li>• Testing for sexually transmitted diseases</li> <li>• Screening for HIV/AIDS</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Cervical cancer screening</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> </ul>	–

Note: IUD – intra-uterine device. \* Wedge resection is "more usual" in rural regions.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

**Fig. A29.4:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year

Source: OFS, 2009c.

#### 4.2 Efficiency of primary care

Of all contacts between GPs and patients, 3.2% are made at the home of the patient, expressed in total time of consultation charged to the health insurance. Of those contacts 5.8% are made by telephone. GPs can charge patients and insurers for this form of care. The average consultation length for GPs was 17 minutes in 2009 (Napierela, 2010).

There is a mean of 2.8 general practice consultations per capita per year (Seematter-Bagnoud et al., 2008), which may be low when compared to other systems. However, this may be explained by the absence of the gatekeeping system and the heavy presence of specialists in ambulatory care. New referrals from GPs to medical specialists per 1000 listed patients per year are estimated at between 50 and 100.

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# 30 Turkey

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## 1. The context of primary care

### Country and population

Turkey is a south-eastern European country of 72.56 million inhabitants in a territory of 785 347 km<sup>2</sup> (mean density of 94 hab./km<sup>2</sup>) (TurkStat, 2009). It is divided into 7 regions and 81 provinces. The annual population growth rate was 1.45% between 2008 and 2009. Total fertility rate is 2.16 children per woman (Hacettepe University Institute of Population Studies, 2008). Currently, 67.0% of Turkish people are aged 15–64, 7.0% are over 65 years and 49.7% are women. The density is very variable between provinces, ranging from 11 in Tunceli to 2486 hab./km<sup>2</sup> in Istanbul (TurkStat, 2009).

### Development and economy

Turkey is a parliamentary representative democracy. Since its foundation as a republic in 1923, Turkey has developed a strong tradition of secularism (Çarkoglu, 2004). The President of the Republic is the head of state and has a largely ceremonial role. Executive power is exercised by the Prime Minister and the Council of Ministers which make up the government, while legislative power is vested in the unicameral parliament, the Grand National Assembly of Turkey.

Turkey has the world's 15th largest GDP (PPP) and 17th largest nominal GDP (World Bank, 2009). The country is a founding member of the OECD and the G20 major economies. The GDP per capita was PPP\$ 12 476 in

**Table A30.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	Turkey	EU <sup>1</sup>	Turkey	EU <sup>1</sup>	Turkey	EU <sup>1</sup>	Turkey	EU <sup>1</sup>	Turkey	EU
1995	2.5	7.6	173	1275.9	n.a.	740.9	112	292.7	28.8	27.5 <sup>6</sup>
2000	4.9	7.9	432	1608.0	200.0	669.0	103	295.1	28.0	28.3 <sup>5</sup>
2005	5.7	8.5	618	2150.9	231.4	604.6	148*	316.0	26.4	26.3 <sup>4</sup>
2009	5.0 <sup>c</sup>	8.8	695 <sup>c</sup>	2788.2	240.7 <sup>c</sup>	564.8	140 <sup>a</sup>	321.6	25.9 <sup>7</sup>	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	Turkey	EU <sup>2</sup>	Turkey	EU <sup>1</sup>	Turkey	EU <sup>1</sup>	Turkey	EU <sup>1</sup>
1995	–	575.1	11.5	12.5	6.0	15.7	1.7	6.6
2000	111* <sup>b</sup>	655.9	10.8	10.3	7.4	17.7	2.4	6.8
2005	180*	682.7	10.4	9.5	11.0 <sup>d</sup>	16.2	4.0	6.8
2009	130 <sup>a</sup>	745.5	10.0 <sup>7</sup>	8.8	13.1 <sup>c</sup>	15.6	6.2 <sup>c</sup>	6.9

Sources: EU average values are based on the European Health for All database (WHO Regional Office for Europe, 2010). Turkey values are based on TurkStat data (TurkStat, 2010), the European Health for All database (WHO Regional Office for Europe, 2010), Vujicic, Sparkes & Mollahaliloğlu (2009), HNP, World Bank (2009). <sup>a</sup> 2009 progress report.

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year 2008 instead of 2009. <sup>8</sup> Practising GPs (and not licensed GPs). <sup>b</sup> Year 2001 instead of 2000. <sup>c</sup> Year 2008 instead of 2009. <sup>d</sup> Year 2006 instead of 2005.

2009 (IMF, 2010). Turkey ranked 83rd on the Human Development Index with 0.679 and was listed among the countries of high human development (UNDP, 2010). The unemployment rate is quite high: 14% of the active population in 2009 (TurkStat, 2009).

Concerning education, 47.9% of the population has at least eight years of school education, but 3.62% of males and 14.65% of females are considered as illiterate (TurkStat, 2009).

#### Population's health

Life expectancy at birth in Turkey is 75.8 years for women, 71.5 years for men (TurkStat, 2009). The infant mortality decreased significantly in the previous years and reached 17 deaths for 1,000 living births in 2008 (Hacettepe University Institute of Population Studies, 2008). However, there is a large discrepancy between the provinces regarding all health indicators. Main causes of hospital deaths in 2008 were cardiovascular diseases (34.3%) cancer (15.3%), respiratory diseases (11.4%) and diseases of nervous system (5.5%). According to gender, cardiovascular diseases are the first cause of hospital deaths for females (37.1%) and second for males (32.1%) whereas cancer is the first cause of hospital deaths for

males (17.7%) and second for females (12.1%) (Ministry of Health, 2010). According to the 2004 Burden of Disease Report, perinatal causes and cardiovascular diseases, respiratory system diseases, cancer, osteoarthritis and psychological disorders defined as chronic diseases constitute the disease burden for the population in Turkey (Ministry of Health & RSHMB, 2004).

#### Characteristics of the health care system

Table A30.1 shows some basic figures about the Turkish health care system. Starting from 1961, with the adaptation of the Law No. 224 on Socialization of Health Services, the main structure of the health system consisted of health posts, health centres (per population of 5000–10 000), mother and child health and family planning centres at primary care level; and province and district hospitals at secondary care level. The basic approach of socialization consisted of multidimensional/integrated services delivery (Ministry of Health, 2009). In the following decades, several pitfalls and inefficiencies, such as regional inequalities in health status, high uninsured population (one-third), variability of services between insurance funds and lack of gatekeeping forced the authorities to plan health care reforms since 1980. As a result the Turkish health care system has undergone

a serious transformation process during the last decade. It was not surprising that this transformation process showed many similarities with the general actual tendency in other parts of the world, especially recent health care reforms in less developed countries in Europe. Starting in 2003, the Ministry of Health of Turkey launched a World Bank supported health care reform, entitled the “Health Transformation Programme”. The aim of this programme was to organize, finance and deliver health services in line with the principles of equity, efficiency and effectiveness. The programme included three major initiatives:

- introduction of a general health insurance scheme by gathering the health funds under one umbrella;
- strengthening of public health care and the introduction of a family practitioner scheme;
- enabling hospitals to have financial and administrative autonomy (Tatar & Kanavos, 2006).

At the end of 2010, the family practitioner scheme will have been introduced in all provinces of Turkey. The annual budget allocated for primary care has doubled from TL (Turkish liras) 2 billion (€0.9 billion) to nearly TL 4 billion (€1.8 billion) in 2009 (Ministry of Health, 2009). Although these developments are quite promising, there are still some challenges to deal with. First of all, the available number of physicians who have specialized in family practice remains far from adequate to serve the entire population (Tatar & Kanavos, 2006). In 2008, Turkey has 1.4 physicians and 1.3 nurses per 1000 people (Ministry of Health, 2009). Another challenge is the gatekeeper role of primary care. Currently, in practice, no referral system is utilized (Ministry of Health, 2009).

## 2. Structure of the primary care system

### 2.1 Primary care governance

Even though primary care was acknowledged as important for many years, its first major legislative basis was introduced through the 1961 Law on the Nationalization of Health Care Delivery. However, it took until 2003, before family medicine began to be introduced as a primary care model responding to the changing health needs of the entire population with a promise of long-term government support.

The government’s vision of current and future primary care has been published in several laws, policy strategies and other formal statements. They include a number of stipulations concerning primary care such as: the disciplines responsible for the provision of primary care; responsibilities and tasks of family doctors, nurses and other primary care disciplines; educational requirements for family doctors; minimum norms for the availability of family doctors in a population; minimum norms for the availability of primary care facilities in rural areas; requirements on keeping medical records in primary care; requirements on monitoring the performance of primary care. Specific primary care policy targets (including date of achievement) are nonexistent in the published policy documents.

The Ministry of Health is the major provider of primary and secondary health care and the only provider of preventive health services in Turkey. Primary health care has its own department (called the General Directorate of Primary Health Care) at national level and is financed through a (nationally set) budget within the Ministry of Health since 1963 (Kringos et al., 2008; Ministry of Health, 2009). About 75% of primary care facilities are under the responsibility of the Ministry of Health. About 25% are managed by universities, the Turkish army and private providers. At the central level, the Ministry of Health is responsible for Turkey’s health policy and health services. The General Directorate of Primary Health Care in the Ministry is in charge of the strategic and operational management of health centres (newly called family health centres) and community health centres. Provincial health directorates manage the health services at the provincial level. Staff in each of the 81 provincial health directorates are appointed by the Ministry of Health, with the approval of the provincial governor. The directorates make technical decisions concerning the scope and volume of health services and, furthermore, have responsibility for matters of personnel and estate management. Health care units at the provincial level mainly consist of: family health centres, community health centres, mother and child health and family planning centres (with the Health Transformation Programme, they are reduced in number, embedded in community health centres, and their function is more organizational and educational than to do with service provision), tuberculosis dispensaries, and hospitals. At the end of 2010, the total number of family health centres is 6330 and community health centres is 986 nationwide. A total of 20 183 family doctor positions exist in these centres.

In the past, the relationship between the central and provincial levels has been characterized by poor communication and lack of coordination, which has resulted in more regional diversity in the provision of health services than might be expected from the centralized structure of the health care system. However, it appears there is no longer so much variation between provinces in primary care policy or specific priorities. There are now uniform standards of implementation and provinces pay attention to them, although Istanbul, with its population of more than 10 million and neglected primary care services over many years, seems to be a big challenge. Other differences still exist between provinces; for instance, in the prevalence of family doctors and in the payment system for primary care physicians. However, these differences are not the result of diversity in provincial health policy but are related to the phased introduction of family medicine. There are no regional differences in terms of tasks and responsibilities for family doctors, coverage (such as co-payments for patients) or norms for the target population per family doctor. Therefore, despite some decentralization actions, the role of the Ministry of Health in primary care is still strong. Organizations of (medical) professionals and organizations representing patients or consumers and other non-governmental organizations are involved in the policy-making process with the Ministry of Health on an ad hoc basis (Kringos et al., 2008; Savas, Karahan & Saka 2002).

Current laws and official policy statements include minimum norms for the availability of family doctors in the population and minimum norms for the availability of primary care facilities in rural areas, but do not stipulate anything about distributing primary care providers (except for underdeveloped areas) and facilities more evenly. Primary care physicians are geographically very unevenly distributed in Turkey.

Quality improvement mechanisms are being implemented gradually in primary care. Internal practice checks and practice inspections by health authorities and external clinical audits are applied infrequently. Obligatory periodic tests of professional knowledge and skills of primary care providers are not used.

The Ministry of Health is responsible for the certification of primary care physicians. To be certified as a family doctor, candidates are currently required to complete a retraining course, which has been developed by the relevant medical university departments in collaboration

with the Association of Family Physicians. At present, there is no periodical recertification scheme for primary care, so as yet there are no criteria for recertification, such as minimum amounts of continuing medical education activities or having practised as family doctor for a certain period of time. Currently, no medical specialization is needed to work as a family doctor, although approximately 10% of active primary care physicians are family physicians who had vocational training. Similarly, for nurses, no special primary care training is needed. No deadline for obligatory vocational training in primary care has been declared by the authorities; consensus is emerging on introduction of obligatory vocational training starting in the year 2017. There are regulations for primary care facilities concerning minimum standards for the design of premises, equipment and hygiene.

The Ministry of Health coordinates the development and implementation of clinical guidelines for primary care. The approach seems to be hierarchical. Topics are determined by the Ministry, which assigns medical specialists to draft the guidelines. Efforts are being made to involve GPs and family doctors into this process. The prepared guidelines are subsequently distributed by the Ministry to all health centres (Kringos et al., 2008).

Basic patient rights, including informed consent, patient access to own medical files, confidential use of medical records and availability of patient complaint procedures, were formalized in the 1998 statute of patient rights (Kringos et al., 2008).

## 2.2 Economic conditions of primary care

The annual budget allocated for primary care was nearly TL 4 billion (€1.8 billion) in 2009 (Ministry of Health, 2009). Out of total expenditure on health, 2.3% was spent on prevention and public health in 2000 (OECD, 2009).

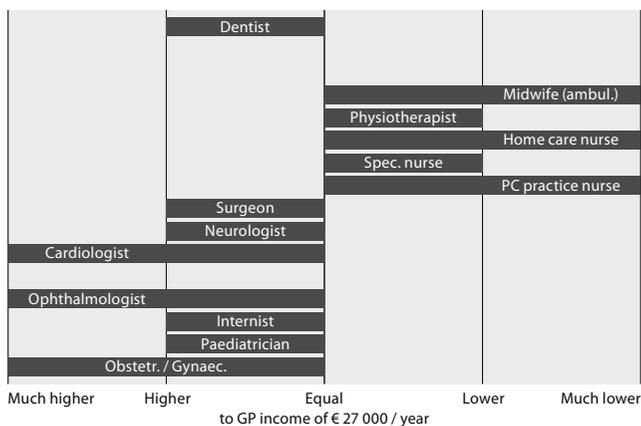
In 2007, 29% of Turkish respondents to a Eurobarometer survey rated family medicine care as not very affordable (European Commission, 2007).

Although formally primary care services are free of charge, a declaration from the Ministry of Finance dated September 2009 regulated out-of-pocket payments for outpatient clinics. According to this declaration patients had to pay TL 2 (€0.92) for each visit of family physician. They pay this at the pharmacy when they get their medicine. This situation was brought to court and

the State Council decided to stop implementing this in April 2010. Now family medicine visits seem to be free of charge, but the government may find another way to ask for contributions at any time (State Council Division 10, 2010). In 2008, 14.4% of males and 10.9% of females have no health insurance coverage (TurkStat, 2010).

In 2007, most primary care providers were state-employed. A WHO-NIVEL study performed in 2007 among family doctors in two Turkish provinces (Bolu province,  $n = 37$ ; Eskisehir,  $n = 41$ ) showed that almost all family doctors (90%) were salaried. In addition, capitation elements of payment (including additional bonuses for working in disadvantaged areas and also limited performance payment for predefined preventive services) were reported by 59% of the family doctors in Bolu and 35% in Eskisehir (Kringos et al., 2008). Since the end of 2010 all family doctors working in primary care are self-employed with contracts to health authority (Kringos et al., 2008). The average monthly income of a family doctor (with five years' experience) is €2250. Fig. A30.1 shows how this income relates to the annual income of other medical professionals. Recently (30 December 2010) a *Directory of contract and payment regulations* for primary care professionals was published. According to this directory, the income of a family doctor will be affected positively if he/she has finished vocational training, performs high percentages of preventive services (vaccination, antenatal care, etc.), is working in a family health centre with a high quality rank, has more pregnant, elderly or child patients and is working in an underdeveloped area (Ministry of Health, 2011).

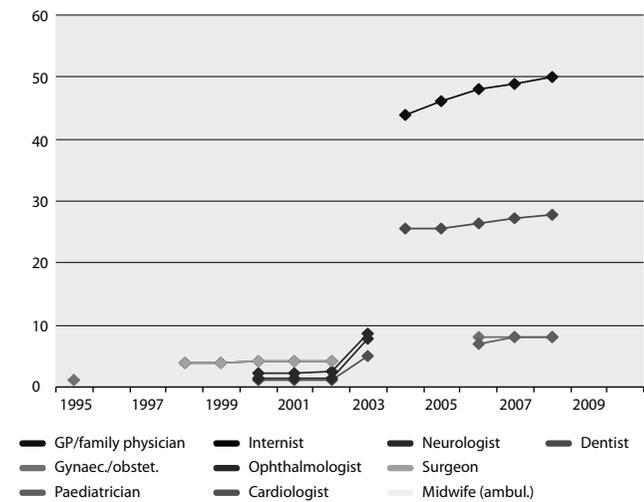
**Fig. A30.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

There is no obligatory referral system at the moment, which means patients can go to any health unit, and any health professional at any time. Primary care is therefore delivered by family doctors, in addition to all types of medical specialists. Out of all active physicians, 13.8% are working in primary care (as a GP or family doctor) in 2007 (Kringos et al., 2008). Fig. A30.2 shows a steady increase in the supply of GPs over the past years. A slower upward trend is shown for the other medical professions.

**Fig. A30.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



The average age of family doctors is 39 years (in 2007). The WHO-NIVEL study performed in 2007 among family doctors in two Turkish provinces showed that 41% of the family doctors are younger than 35 years, 38% are aged 35–45 years, and 21% older than 45 years of age (Kringos et al., 2008).

In a normal week a family doctor works an average of 51.2 hours (Kringos et al., 2008). The official minimum working hours of family doctors is 40 hours. Additional hours worked are on a voluntary basis. In May 2010, the Ministry of Health issued a directory about the practice of family medicine, explaining the responsibilities of health professionals in primary care. A law about family medicine implementation has not been proposed for discussion yet. However, there is ongoing work on it, which might be put before Members of Parliament in winter 2011, or otherwise postponed until the elections in June 2011.

The family medicine specialization in primary care is increasingly being seen as a career. In the past, being a (non-specialized) GP used to be the first step towards becoming a secondary medical specialist. Now, family medicine is more appreciated as a full specialty in its own right. The capacity for specialization in family medicine amounts to about 500 places per year (which is about 11% of the total number of places for specialization). About 80% of family medicine university places are occupied. Up to 2007, about 300 family doctors have completed the postgraduate training each year.

Family medicine departments have been established in three-quarters of the medical universities (currently 40 out of the total of 54). They are involved in education as well as scientific research. Most of the postgraduate training programmes in family medicine last three years. In all universities, part of the residency programme in family medicine is spent in primary care practice; the duration varies between six months and one year (Kringos et al., 2008). The curriculum for vocational training for family medicine has been revised very recently and the obligatory primary care period was set at 18 months for all residents.

The national professional organization of family physician specialists is TAHUD (Türkiye Aile Hekimleri Uzmanlık Derneği), which was established in 1990. TAHUD's activities include: defence and advocacy of its members' material interests, professional development, education and scientific activities. It publishes a four-monthly journal for its members. Provincial associations of family doctors have also been set up in seven provinces. There are also independent associations for family doctors, mostly family doctors without vocational training, in several provinces. Some of them give membership to specialist family physicians as well. With the participation of all these provincial associations the Turkish Federation of Family Doctors' Associations was established in 2008.

### 3. Primary care process

#### 3.1 Access to primary care services

Over recent years, there has been a systematic increase in the availability of family doctors working in primary care. However, compared to the overall number of physicians, there are still severe shortages of physicians and nurses in primary care. Besides, there are geographical differences in the availability of family doctors. The difference

between the provinces with the highest and lowest density of family doctors is 34 per 100 000 population (in 2007) (Ministry of Health, 2010). Shortages (of physicians and nurses in primary care, gynaecologists, cardiologists, surgeons, dentists, pharmacists and hospital nurses) seem to be more severe in the eastern provinces than in the west. There is no up-to-date register of primary care professionals which is actively used for human resources planning. This could be one of the measures needed to overcome these shortages (Kringos et al., 2008).

In some rural areas there is a lack of availability of medicines due to a shortage of pharmacies. The Ministry of Health is planning to introduce mobile pharmacy services for these areas, like the existing mobile primary health care services in rural areas.

In 2007, only 60% of the Turkish respondents to a Eurobarometer survey reported being satisfied with access to primary care in general (European Commission, 2007). In another satisfaction study coordinated by Hıfzısıhha School of Public health, the provincial health directorates implemented the Europep among 34 472 patients, who received primary health care services in 81 provinces in June 2010. Pertaining to the views about the health care facility last visited, patient satisfaction was found to be 82.8% in the provinces under the family medicine implementation, 80.1% in the provinces without the family medicine implementation and 81.2 % in all provinces in general (Dağdeviren & Akturk, 2004).

Appointment systems are generally not used in primary care (see Fig. A30.3). Nor are e-mail consultations or a practice web site generally used. Family doctors do frequently perform telephone consultations, and sometimes offer special clinical sessions (for example for diabetic patients) (Kringos et al., 2008).

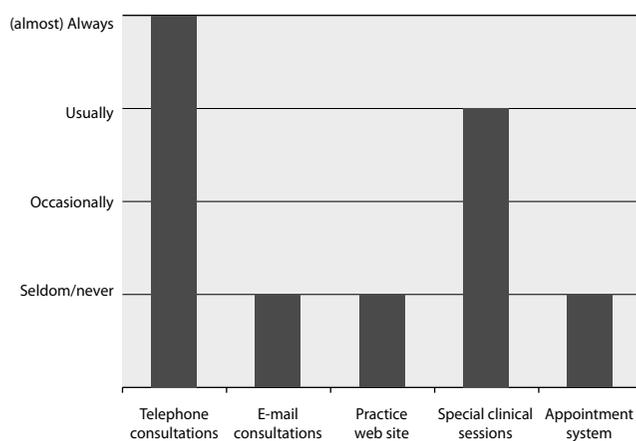
**Table A30.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Woman aged 18 asking for oral contraception</li> </ul>	<ul style="list-style-type: none"> <li>• Man aged 28 with a first convulsion</li> <li>• Man with suicidal inclinations</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Mild depression</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Wound suturing</li> <li>• Setting up an intravenous infusion</li> </ul>	<ul style="list-style-type: none"> <li>• Excision of warts</li> <li>• Fundoscopy</li> <li>• Joint injection</li> </ul>
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Testing for sexually transmitted diseases</li> <li>• Screening for HIV/AIDS</li> <li>• Cervical cancer screening</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Family planning/contraceptive care</li> <li>• Routine antenatal care</li> <li>• Routine paediatric surveillance to children up to 4 years</li> <li>• Infant vaccinations</li> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> </ul>	–

Note:

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

**Fig. A30.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres



Family doctors can define their own working hours as long as they work a minimum of 40 hours per week. The WHO-NIVEL study performed in 2007 showed that 38% of the responding family doctors said they did not make any home visits. Among patients ( $n = 1492$ )

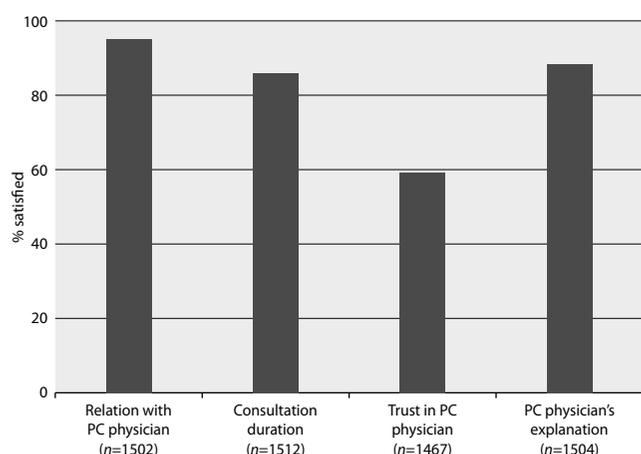
there was quite strong reservation as to whether the family doctor would make a home visit at the request of the patient. Only one-third (33%) thought this would happen; almost half (45%) did not know whether they would get a home visit; 22% of the patients were convinced their family doctor wouldn't make any home visits (Kringos et al., 2008).

The model of providing primary care services in the evenings and during the weekend differs according to geographical region. However, the most commonly used model for after-hours care is practice-based services, in which family doctors within one practice or organized in a group of practices look after their patients on out-of-hours schedules. Hospital emergency departments also occasionally provide primary care services after office hours (Kringos et al., 2008) Continuity of primary care services

Most family doctors use a patient list system, with an average list size of 3687 patients. Of the patients in the WHO-NIVEL study (Kringos et al., 2008), 77.8%

reported visiting their usual provider for their common health problems. Patients are free to choose their health centre and provider. However results from the 2007 WHO-NIVEL study showed that the policy on choice principles is either not very well defined or not well communicated to patients, as they were mostly not aware of these principles. Fig. A30.4 shows that patients were least satisfied with regard to their trust in their family doctor. They were however satisfied with the average consultation duration of 11 minutes and other aspects of the quality of their relation with their family doctor.

**Fig. A30.4:** Patient satisfaction with aspects of care provision



The same study showed that only 42.3% of the family doctors ( $n = 78$ ) kept clinical records for all patient contacts routinely. Concerning the quality and confidentiality of medical records, the only requirement is that records must be kept electronically. All family doctors have a computer at their disposal in their office, which is mostly used for keeping medical records and searching for expert information on the internet. Only a minority of family doctors can easily generate lists of patients by diagnosis or health risk with their current medical record system. Routinely, all family doctors are asked to send their health statistics to regional health authorities for developing health politics for future.

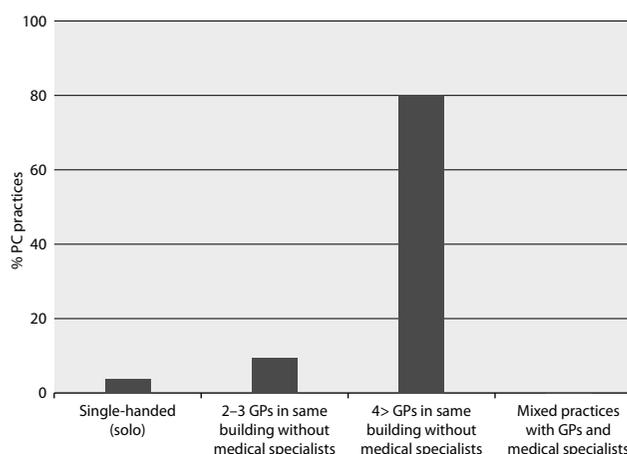
Patients have direct access to any medical care provider for their health care problems. Family doctors occasionally use referral letters when they refer a patient to a medical specialist. They also only occasionally receive information within 24 hours about contacts that patients have had with out-of-hours services. There is no standardized system of communication between family

doctors and medical specialists. Specialists only rarely communicate back to a family doctor after an episode of treatment (Kringos et al., 2008).

### 3.2 Coordination of primary care services

Teams of three or more family doctors are the dominant organizational model of practice (see Fig. A30.5). Family doctors sometimes also work with disciplines other than doctors in their family medicine centre. Out of family doctors, 76.6% work in their centre with practice nurses; 54.5% work with midwives/birth assistants; 15.6% work with community/home care nurses; 7.8% work with dentists; 1.3% work with pharmacists.

**Fig. A30.5:** Shared practice



Family doctors have regular face-to-face meetings (at least once per month) with other family doctors, practice nurses, and less so with midwife/birth assistants, pharmacists and social workers. It is very common for family doctors to work with a re-trained practice nurse who provides several services, including maternal care services, immunizations, or health promotion and education services.

There is very little communication and cooperation between family doctors and medical specialists. For example family doctors rarely ask advice from medical specialists, and specialists rarely provide clinical lessons for family doctors or offer joint consultations (Kringos et al., 2008).

### 3.3 Comprehensiveness of primary care services

Family doctors are the main providers of primary care. Primary care is provided in family health centres by one or more family doctors, depending on the size of the centre. Family doctors have a strong position as doctor of first contact for women and children (see Table A30.2). However, they are not the obvious entry point for nonmedical problems. The involvement of family doctors in the treatment of diseases could be improved, if compared to colleagues in western Europe. However, compared to the situation in Turkey 15 years ago, the position is much better now. Family doctors are moderately involved in the provision of preventive care and care for specific patient groups. There are also few links with the community in which primary care is provided.

## 4. Outcome of the primary care system

### 4.1 Quality of primary care

There is currently (2010) no official data available on the quality of primary care.

### 4.2 Efficiency of primary care

Very little official information is available on the efficiency of primary care.

Of all family doctor–patient contacts, 3.6% are home visits. Patients on average have 7.6 visits to a family doctor each year. An average consultation takes 11 minutes (Kringos et al., 2008).

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31

# United Kingdom

*A. Wilson*

## 1. The context of primary care

### Country and population

The United Kingdom comprises England, Scotland, Wales and Northern Ireland. Its total land area is 244 820 km<sup>2</sup> (England 130 373, Scotland 78 775, Wales 20 767, Northern Ireland 14 120).

The total population in mid-2009 was estimated as 61.79 million (84% England, 8% Scotland, 5% Wales, 3% Northern Ireland). Of the total population, 17.5% were aged 0–14 and 16.2% 65 and over. In 2009, population growth was 0.64%.

United Kingdom population density is 244 per km<sup>2</sup> (England 380, Scotland 65, Wales 141, Northern Ireland 125). In the 2001 census, 92.1% described their ethnicity as white, 4.0% as Asian or Asian British, 2.0% as Black or Black British and 1.2% as mixed race.

### Development and economy

The United Kingdom is a constitutional monarchy, in which a hereditary monarch is head of state and the Prime Minister is head of government. Legislative powers are held by the two houses of parliament, the elected House of Commons, and the appointed House of Lords. Some executive and legislative powers are devolved to the Scottish Parliament and the Welsh and Northern Ireland assemblies, including responsibility for health and the National Health Service (NHS).

**Table A31.1:** Development of health care resources and utilization

	Total health expenditure as % of GDP		Total health expenditures per capita (in PPP\$)		Hospital beds (per 100 000 population)		Physicians (per 100 000 population)		GPs as % of all physicians	
	United Kingdom	EU <sup>1</sup>	United Kingdom	EU <sup>1</sup>	United Kingdom	EU <sup>1</sup>	United Kingdom	EU <sup>1</sup>	United Kingdom	EU
1995	6.8	7.6	1349	1275.9	n.a.	740.9	175	292.7	35.0	27.5 <sup>6</sup>
2000	7.0	7.9	1833	1608.0	410	669.0	196	295.1	32.5	28.3 <sup>5</sup>
2005	8.2	8.5	2693	2150.9	373	604.6	239	316.0	29.8	26.3 <sup>4</sup>
2009	9.0 <sup>7</sup>	8.8	3230 <sup>7</sup>	2788.2	338 <sup>7</sup>	564.8	268	321.6	29.4	25.5 <sup>3</sup>

	Nurses (per 100 000 population)		Average length of stay (days) in all hospitals		Acute care hospital admissions (per 100 population)		Outpatient contacts per person (per year)	
	United Kingdom	EU <sup>2</sup>	United Kingdom	EU <sup>1</sup>	United Kingdom	EU <sup>1</sup>	United Kingdom	EU <sup>1</sup>
1995	n.a.	575.1	9.9	12.5	11.8	15.7	6.1	6.6
2000	868	655.9	9.9	10.3	12.5	17.7	n.a.	6.8
2005	992	682.7	9.0	9.5	12.7	16.2	n.a.	6.8
2009	957	745.5	8.0 <sup>7</sup>	8.8	12.8 <sup>7</sup>	15.6	n.a.	6.9

Sources: EU and UK data from WHO European Health for All database (WHO Regional Office for Europe, 2010).

Notes: <sup>1</sup> Years: 1992, 1997, 2002, 2007. <sup>2</sup> Years: 1991, 1996, 2001, 2006. <sup>3</sup> Year 2005, EU average excluding ES, CY, GR, MT, PL, RO, SK, UK. <sup>4</sup> Year 2002, EU average excluding CY, ES, GR, MT, PL, RO. <sup>5</sup> Year 1997, EU average excluding BG, CY, ES, GR, MT, NL, PL, RO, SK. <sup>6</sup> Year 1993, EU average excluding CY, ES, GR, MT, NL, PL, RO. <sup>7</sup> Year: 2008.

The United Kingdom is the 6th largest economy in the world, and the third largest in Europe, with a GDP of US\$ 2183.6 billion. It ranks 22nd in the world for GDP per capita (US\$ 35 334). The United Kingdom's Human Development Index (combining life expectancy, education and GDP) is 0.930 (ranks 4th in Europe, 2001 data) and the GINI coefficient is 34% (2008, compared with 27% in 1983). The proportion of 25–64-year-olds attaining upper secondary and tertiary education is 37% and 32% (2007).

In 2009 unemployment was 7.9%.

#### Population's health

Life expectancy at birth is 77.2 for males and 81.5 for females (2005–2007); equivalent figures for healthy life expectancy are 68.4 and 70.4.

Total fertility rate is 1.96 children per women. In England and Wales, infant mortality rate is 4.8 per 1000 live births (2008).

Leading causes of death are circulatory disease (34% overall; coronary heart disease 15.9%, stroke 9.3%), cancer (27.8% overall; lung cancer 6.0%, bowel cancer 2.8%) and respiratory disease (13.7%)(2007).

In the last decade mortality rates have declined, in particular deaths from circulatory disease. Burden of disease can be estimated by potential years of life lost (PYLL), which weights deaths by their prematurity, using life expectancy of 75 years. The top five causes and the percentage of PYLL for which they account are: ischaemic heart disease (12%), lung cancer (6%), intentional self-harm (4%), traffic accidents (4%) and breast cancer (4%). The five diseases most prevalent in primary care are: acute respiratory infections, musculoskeletal conditions, ENT diseases and skin diseases (2005).

#### Characteristics of health care system

The NHS provides publicly funded health care to the United Kingdom population. It operates independently in each of the four countries of the United Kingdom and is accountable to the devolved administrations in Scotland, Wales and Northern Ireland, and to the United Kingdom government in England.

As shown in Table A31.1, health expenditure expressed as percentage of GDP has historically been lower than the EU average, but in the last decade has increased relative to other countries, reaching 9.0% in 2008, compared with an average of 8.8% across EU countries. The public sector is the main source of health funding; 83% of health spending was funded by public sources in 2008, compared with the EU average of 77%. Compared to other EU countries, the United Kingdom has a higher percentage of physicians who are GPs, fewer hospital beds per head of population, fewer admissions and shorter lengths of stay.

## 2. Structure of the primary care system

### 2.1 Primary care governance

There has been a policy focus on expanding the role of primary care since at least 1994, when the term “primary care led NHS” was first used (NHS Executive, 1994). In the last decade, there have been attempts to increase quality of primary care and to reduce inequalities through the introduction in 2004 of a United Kingdom-wide pay-for-performance scheme linked to quality targets, and an emphasis on increasing provision of care in under-doctored areas (Department of Health, 2003).

Between 2005 and 2009, all four nations have published policy documents promoting patient-centred care and quality assurance. In England, the focus has been on developing a competitive market in primary care, whereas in the devolved administrations more emphasis has been placed on collaboration and integration of services (Department of Health, 2008; Department of Health, Social Services and Public Safety, 2005; Scottish Government, 2009; Welsh Assembly Government, 2005).

Since devolution in 1999, structures of primary care and strategic priorities have differed. In England, budgets are allocated to primary care trusts according to population, weighted by age and sociodemographic features. There are 151 primary care trusts, with an average population of 342 000 (Primary Care Trust Network, 2010). These organizations are responsible for about 80% of the NHS budget and commission primary and secondary care, as well as mental health services. Although some services, such as community nursing, are delivered directly by primary care trusts, the trend is towards these services becoming separate entities. There is also increased emphasis on commissioning services from private and

third sector providers. In Scotland and Wales, health boards ( $n = 14$  and  $22$  respectively) are responsible for allocating resources and delivering primary and secondary health care. In Northern Ireland, the delivery of health and social care is integrated.

Quality inspectorates operate in all four nations; in England, the Care Quality Commission is responsible for health and social care (Care Quality Commission, 2009). The equivalent body in Northern Ireland is the Safety, Quality and Standards Directorate. NHS Quality Improvement Scotland includes primary and secondary care, as does the Healthcare Inspectorate Wales. Regular patient surveys are conducted independently throughout the United Kingdom.

Quality of care is also promoted through the dissemination of evidence based guidelines by the National Institute of Health and Clinical Excellence (NICE), which also has responsibility for assessing whether new drugs and technologies should be made available through the NHS (NICE, 2003). NICE operates in England, Wales and Northern Ireland; the equivalent body in Scotland is the Scottish Intercollegiate Guideline Network (SIGN).

In England, patient rights, including for example access to medical records, have recently been consolidated in the NHS Constitution (Department of Health, 2009).

### 2.2 Economic conditions of primary care

There are no routinely published data on primary care expenditure, either in absolute terms or as a percentage of health expenditure. There are also problems with definition as some services, such as midwifery, span primary and secondary care. Using data for 2007, about 20% of total health expenditure was spent on services provided by GPs, pharmacists and optometrists. This compares to an estimated 4.0% of health expenditure on prevention and public health (Health England, 2009).

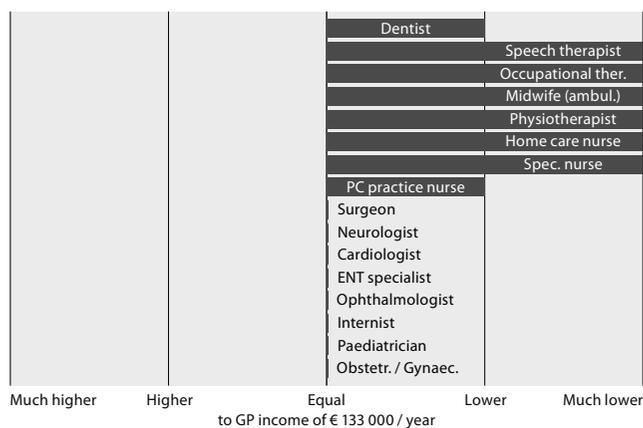
The NHS provides publicly funded health care for all the United Kingdom population. There are no co-payments for core general practice services other than prescription charges, and these have been, or soon will be, abolished in all countries except England. The current charge is £7.20 per item, although almost 90% of prescriptions do not incur a charge, as children, people over 60 and other groups are exempt. Co-payments also apply for dental and optometry services (Eversley, 2001).

Traditionally, GPs have been self-employed independent contractors, working single-handedly or in partnerships. However there has been a growth of salaried GPs in the last decade, and this group, most of whom are employed by independent contractors, now comprises about 20% of the general practice workforce (NHS Information Centre, 2007).

Self-employed GPs are paid by a mixture of capitation and fee-for-service payments, including quality payments which were introduced in 2004, and account for about 20% of income. The Quality and Outcomes Framework awards general practices with achievement points for: managing some of the most common chronic diseases e.g. asthma, diabetes; how well the practice is organized; how patients view their experience at the surgery; and the amount of extra services offered such as child health and maternity services (NHS Confederation and the BMA, 2004).

Average earnings of general practice principals are similar to those of hospital consultants, although the latter may be boosted by clinical excellence awards and payment from private practice. Salaried GPs' earnings are about 25% lower than those of self-employed GPs (NHS Information Centre for Health and Social Care, 2010). The salaries of other professionals in the NHS are typically lower or much lower than those of GPs, as shown in Fig. A31.1.

**Fig. A31.1:** How does the average income of mid-career health professionals relate to that of a mid-career GP?



### 2.3 Primary care workforce development

The core primary care team includes GPs, who may be partners or salaried, and directly employed practice nurses and managerial/administrative staff. Other primary care professionals, such as community nurses,

midwives and therapists are usually employed by other NHS organizations and are attached either to the practice or a geographically defined population. With few exceptions, such as genitourinary medicine, access to NHS medical specialists is available only through referral by the GP. This is also generally the case for access to private specialist care.

In England (in 2008), 22% of the GPs were aged 55 years and older, and 26% were aged under 40 years. Thus, the largest proportion of GPs is aged between 40 and 55 years (NHS Information Centre, 2009).

The average number of hours worked per week by a full-time general practice partner is 44.4, about 68% of which are spent in direct patient care (NHS Information Centre, 2007). The responsibilities of GPs are set out in detail in the GP contract, which was substantially revised in 2004, including the removal of responsibility for out-of-hours care.

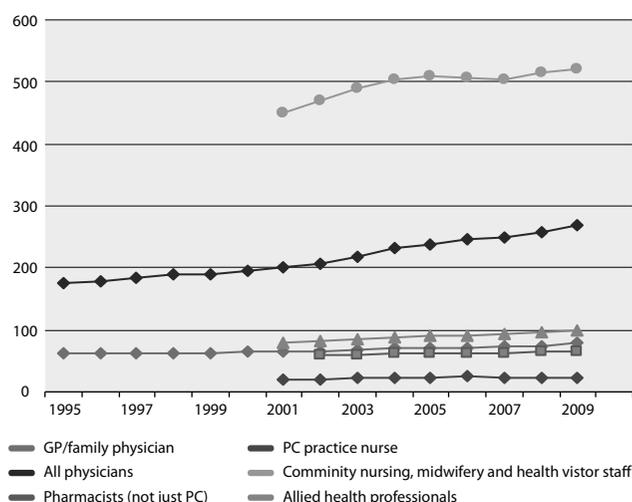
All United Kingdom medical schools have academic departments of general practice, which contribute on average 9% of the undergraduate curriculum. About a quarter of medical graduates choose to train for general practice. Training has been compulsory since 1995, and consists of a three-year programme, at least one year of which must be spent in general practice, followed by a summative assessment. This examination is organized by the Royal College of General Practitioners, which also has responsibility for professional development, education and scientific activities and publishes the *British Journal of General Practice*. Most GPs continue to renew their membership of the college, although this is voluntary (RCGP, 2008).

Nurses in primary care are trained either as district nurses, which requires a one-year degree-level course after three-year basic nurse training, or as practice nurses, whose training is more flexible. The professional organization for nurses is the Royal College of Nursing, which includes the Practice Nurses Association.

Changes in supply of the primary care workforce in England are shown in Fig. A31.2, with the supply of all physicians for comparison. This shows significant increases in community nursing staff and total physicians, whereas the supply of GPs, practice nurses and community-based allied health professionals is relatively stable. NHS workforce planning has been reorganized

several times since a primary care workforce planning framework was published in 2002 (Imison, Buchan & Xavier, 2009).

**Fig. A31.2:** The development in supply of primary care professionals per 100 000 inhabitants in the most recent available five-year period



### 3. Primary care process

#### 3.1 Access to primary care services

There are 72 GPs per 100 000 population, although this differs within and between nations. In England, provision ranges from 83.5 to 40.6 per 100 000 population, with a consistent inverse relationship between need and supply. Average list size in the United Kingdom is 1745, highest in England and lowest in Scotland (England 1802, Wales 1695, Northern Ireland 1664, Scotland 1380; 2003 data, patients per unrestricted principal) (RCGP, 2004). United Kingdom residents have a right to register with a practice as long as they reside in its catchment area.

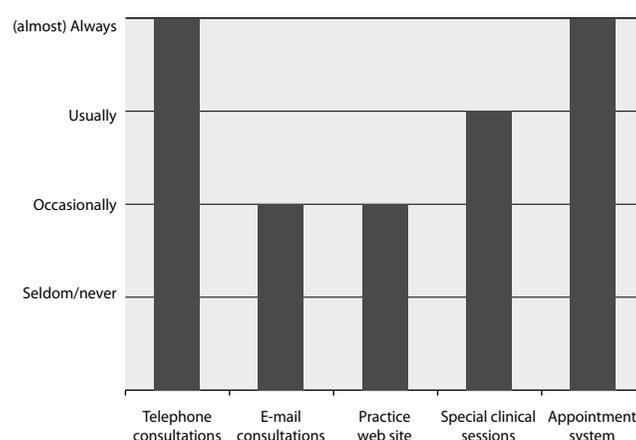
GPs are contracted to provide services between the hours of 08:00 and 18:30, and an increasing number offer services beyond these hours. There are also targets for accessibility, ensuring that patients can see a GP within 48 hours and a primary care professional within 24 hours, although these are currently under review. Results from the 2008/2009 patient access survey showed that 81% were satisfied with their practice's opening hours (Department of Health, 2010).

Most GPs operate appointment systems, typically at 10-minute intervals, and offer home visits (which are declining in number) and telephone consultations (which

are increasing) (Hippisley Cox, Fenty & Heaps, 2007). An increasing number of practices operate web sites and offer electronic booking, although few conduct e-mail consultations. Practice nurses may offer special clinic sessions for certain groups, such as those with diabetes or COPD. These features are summarized in Fig. A31.3.

Following referral from a GP, there is no charge to see a specialist under the NHS. As detailed in section 2.2, there are co-payments for prescriptions in England, although several groups are exempt.

**Fig. A31.3:** The extent to which organizational arrangements commonly exist in primary care practices or primary care centres

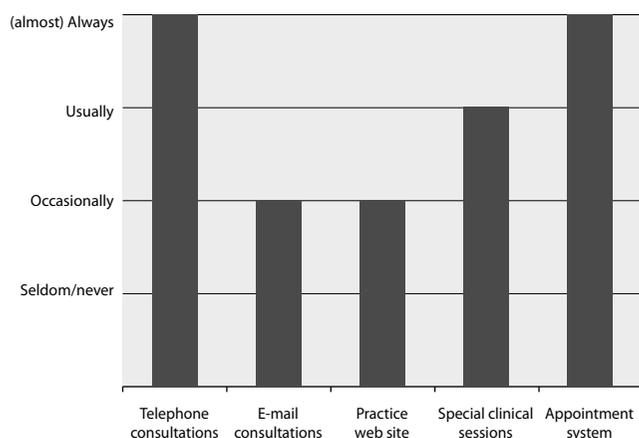


#### 3.2 Continuity of primary care services

General practices have a list of registered patients. A recent survey in England found that 62% preferred to see a particular doctor, and that of these, 55% always or almost always achieve this, and that a further 20% achieve it most of the time (Department of Health, 2010).

Almost all general practice patient records are computerized, and move with the patient when they change practice. Laboratory results are usually transmitted electronically, and in England most referrals are made through an online "choose and book" system. However correspondence back from the hospital is usually by letter, which can be delayed.

Levels of patient satisfaction with continuity are high; the 2008/2009 patient survey reported that 88% of those who wanted an appointment with a particular doctor were able to get this. Levels of satisfaction with other aspects of general practice services are generally high, as shown in Fig. A31.4.

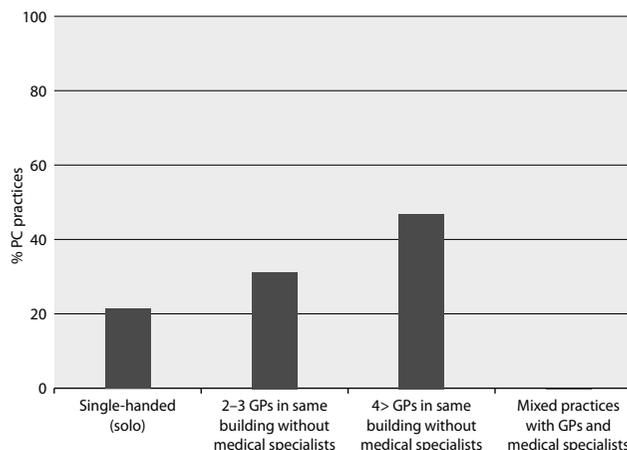
**Fig. A31.4:** Patient satisfaction with aspects of care provision

### 3.3 Coordination of primary care services

With certain exceptions, such as genitourinary medicine, access to medical specialists requires a referral from a GP.

Most GPs work in groups of two or more doctors (see Fig. A31.5) and share premises with practice nurses, health care assistants and administrative staff, with whom there are regular face-to-face meetings. Other NHS primary care staff, such as district and specialist nurses, counsellors, and drug, alcohol and smoking advisers, may conduct clinics in general practice premises. Patients usually have direct access to practice and district nurses, but need referral to physiotherapists, occupational therapists and specialist nurses or counsellors. In recent years there has been increased skill mix in primary care, especially nurse-led chronic disease clinics; between 1995 and 2006, the percentage of consultations conducted by nurses increased from 21% to 34% (NHS Information Centre, 2007).

Communication between GPs and specialists is usually by letter; outreach consultant clinics are rare, especially in urban areas, as are telephone conversations between specialists and GPs (Bond et al., 2000). General practice derived data, especially on prevalence of chronic disease and its control, are used by primary care organizations and public health to plan services.

**Fig. A31.5:** Shared practice

### 3.3 Comprehensiveness of primary care services

The comprehensiveness of primary care services is shown in Table A31.2. GPs have access to basic equipment to conduct a full physical examination (e.g. otoscope, ophthalmoscope, vaginal speculum, peak flow meter) and diagnostic testing (e.g. urinalysis and blood sugar estimation). Premises usually include more specialist diagnostic equipment such as ECGs and spirometers, and in some cases 24h ECG and blood pressure monitors and ultrasound scanners. Blood tests and other samples are usually taken in the practice and sent to a local laboratory for analysis, although some practices have near-patient testing facilities.

General practice is usually the first point of contact for physical and psychological symptoms in adults and children, where the patient may consult a GP or nurse. In recent years there has been an increase in the provision of alternative sources of advice, such as NHS Direct (telephone and online), and walk-in centres. Additionally, the contribution of community pharmacists has been promoted for the management of minor illness.

General practice is also the main provider of chronic disease management, again with increased use of nurses and nurse practitioners. Most cases of type II diabetes, hypertension, asthma, COPD and anxiety and depression are managed entirely within primary care, with specialist referral only if management is problematic. For more unusual and complex conditions, such as rheumatoid arthritis and inflammatory bowel disease, care is shared between a specialist and primary care. Similarly, terminal care and management of severe dementia is usually shared between the GP and specialist colleagues.

**Table A31.2:** GPs' involvement in delivery of various primary care services\*

GPs' estimated involvement in the provision of:	GPs are "always" involved in the provision of care regarding:	GPs are "seldom or never" involved in the provision of care regarding:
First-contact care (from a list of 10 items)	<ul style="list-style-type: none"> <li>• Child with severe cough</li> <li>• Child aged 8 with hearing problem</li> <li>• Woman aged 18 asking for oral contraception</li> <li>• Woman aged 20 for confirmation of pregnancy</li> <li>• Woman aged 35 with irregular menstruation</li> <li>• Woman aged 35 with psychosocial problems</li> <li>• Woman aged 50 with a lump in her breast</li> <li>• Man aged 28 with a first convulsion</li> <li>• Man with suicidal inclinations</li> <li>• Man aged 52 with alcohol addiction problems</li> </ul>	–
Treatment and follow-up of diseases (from a list of 9 items)	<ul style="list-style-type: none"> <li>• Chronic bronchitis</li> <li>• Peptic ulcer</li> <li>• Congestive heart failure</li> <li>• Pneumonia</li> <li>• Uncomplicated diabetes type II</li> <li>• Mild depression</li> <li>• Cancer (in need for palliative care)</li> <li>• Patients admitted to a nursing home/ convalescent home</li> </ul>	–
Medical technical procedures (from a list of 10 items; involvement of GP or PC practice nurse)	<ul style="list-style-type: none"> <li>• Fundoscopy</li> </ul>	–
Preventive care (from a list of 8 items)	<ul style="list-style-type: none"> <li>• Immunization for tetanus</li> <li>• Influenza vaccination for high-risk groups</li> <li>• Cervical cancer screening</li> <li>• Cholesterol level checking</li> </ul>	<ul style="list-style-type: none"> <li>• Breast cancer screening</li> </ul>
Health promotion (from a list of 4 items)	<ul style="list-style-type: none"> <li>• Counselling in case of obesity</li> <li>• Counselling in case of poor physical activity</li> <li>• Counselling in case of smoking cessation</li> <li>• Counselling in case of problematic alcohol consumption</li> </ul>	–

Note: IUD – intra-uterine device.

\* Answering categories for the involvement of GPs: (almost) always; usually; occasionally; seldom or never.

The extent to which technical procedures such as minor surgery, joint injection and suturing varies between practices, according to skills within the practice and proximity to hospital and emergency departments. Financial incentives have been developed to encourage practices to undertake such “enhanced services”.

Primary care is the main provider of primary prevention (childhood and influenza immunization) and secondary prevention (including screening for cardiovascular risk and cervical cancer). Some screening programmes, for example breast and bowel cancer, and aortic aneurism, are organized outside the practice, but may be delivered from practice premises. GPs and practice nurses provide

contraceptive advice, and contribute to child health surveillance, in collaboration with health visitors, who may be practice or locality based. Antenatal care is usually led by midwives.

Other aspects of health promotion, for example exercise promotion, and advice about smoking and alcohol, are often initiated within primary care, but may also involve specialist services outside the practice, some of which allow direct access by the public.

#### 4. Outcome of the primary care system

##### 4.1 Quality of primary care

Prescribing in primary care has steadily increased in the last decade. In England, the number of items prescribed rose by 67.2% between 1999 and 2009, with cost increasing by 61.4%. Explanations include demographic change, the availability of more effective drugs, and the incentives to improve chronic disease management in the Quality and Outcomes Framework. The groups of drugs showing the biggest increases were those for hypertension, heart failure and diabetes (NHS Information Centre for Health and Social Care, 2010). Prescribing incentive schemes to improve the quality and cost-effectiveness of prescribing are widespread.

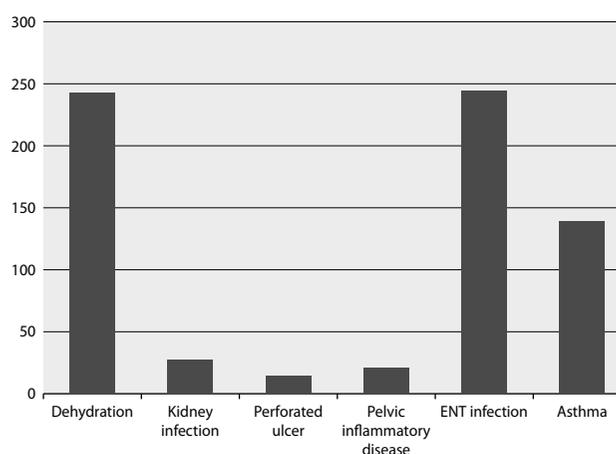
Unplanned admissions represented 36.7% of hospital admissions in England in 2005/2006, and have continued to rise since. A recent audit of emergency admissions in England identified that 5.9% of emergency admissions were considered to be unnecessary, and most of these patients could have been cared for in the community (NCEPOD, 2007). Admissions data for ambulatory care sensitive conditions are shown in Fig. A31.6.

Most major chronic diseases are included in the Quality and Outcomes Framework. This provides practices with financial incentives to undertake routine checks for the specified conditions and achieve targets, for example in control of blood pressure and cholesterol levels. Practice-level data from the Quality and Outcomes Framework are publicly available and published on the Internet. In general they demonstrate an improvement in the management of chronic disease between 2005 and 2009. For example of patients in England with diabetes in 2008/2009, 82.6% had a cholesterol level of 5mmol or

less, 79.9% a blood pressure of 145/85 or less, and 66.3% a HbA1C of 7.5 or less (Information Centre for Health and Social Care, 2010).

Data for primary prevention show that infant immunization rates are 95% for diphtheria, polio and tetanus, but 85% for mumps measles and rubella (2005/2006). Influenza immunization rates for those over 65 range from 68% in Wales to 81% in Northern Ireland (2005/2006). Coverage of the cervical cytology programmes is 78.6% and of breast screening 77.7%.

**Fig. A31.6:** Number of hospital admissions per 100 000 population with a primary care sensitive diagnosis in most recent year



##### 4.2 Efficiency of primary care

The changing pattern of work in general practice is illustrated by United Kingdom-wide workload surveys conducted in 2006/2007 and 1992/1993 (NHS Information Centre, 2007) and by consultations data derived from uploading of anonymized electronic records from practices in England between 1995 and 2006 (Hippisley Cox, Fenty & Heaps, 2007). These show an increase in consultation rate per patient, from 3.9 in 1995 to 5.3 in 2006, mostly due to increased contacts with practice nurses, which rose from 21% to 34% of all consultations. The rate of consultation with a GP was relatively stable increasing from 3.0 in 1995 to 3.3 in 2006. Over this period, home visits declined (to 5.1% of general practice contacts), telephone consultations increased (to 15.4%) and the average length of a general practice consultation increased (to 11.7 minutes). In 2006/2007, an average full-time GP worked 44.4 hours a week, little changed from 1992, if out-of-hours work is excluded.

## Acknowledgements

Dr Margaret Cupples, Queen's University Belfast, and Professor Bruce Guthrie, University of Dundee, contributed to the report and database from Northern Ireland and Scottish perspectives. They and Allen Hutchinson helped to validate items in the database based on consensus opinion.

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